HEWLETT PACKARD

# HP PrecisionScan Pro

User's Guide

Welcome to scanning with HP PrecisionScan Pro and your HP ScanJet scanner

The scanning software and your HP ScanJet scanner let you quickly create excellent electronic images from pictures and convert text on paper into editable text.

Features

Some of the features of the scanning software are:
- Click to select an image in the preview
- Automatic sensing of output type
- Automatic sensing of optimal exposure, color, black and white threshold, sharpen level, and resolution for images of pictures
- Drag-and-drop the image to another program or to the desktop
- Scale and size the image prior to exporting it to a program or a file
- Return to the preview image without rescanning
- Tools for adjusting exposure, color, black and white threshold, sharpen level, and resolution
- Save and re-use scanning settings
- Use **HP PrecisionScan Pro** scanning software and your HP ScanJet scanner on a local area network
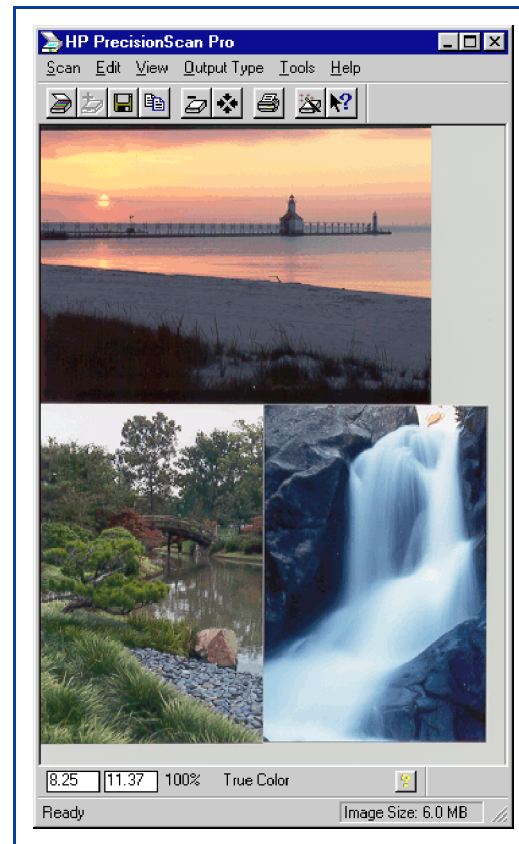
Support for your new product

No matter where you are or when you need it, HP support is there to help you get the most from your HP products. Whether it's making products easier to use or providing you with innovative new ways to tackle your important projects, HP support helps you become a confident and creative user. If you do encounter a problem with your HP product, don't worry. HP support delivers fast, accurate solutions that won't rob you of either your product or your valuable time.

When you're ready to get started, check out HP's Web site,

http://www.scanjet.hp.com

for great ideas and quick tips on how to use your HP product in fun new ways.

How to use this online document

Go to the book contents, chapter contents, or index

■ Click the button in the yellow bar at the bottom of the page when the pointer looks like 👆 .

Page forward one page

■ Press **Enter** or **PgDn**,
– or –
■ Click ⇨ in the yellow bar at the bottom of the page.

Page backward one page

■ Press **Shift+Enter** or **PgUp**,
– or –
■ Click ⇦ in the yellow bar at the bottom of the page.

Jump to a different part of the document

■ Click when the pointer looks like 👆 .

Undo a jump

■ Click ◀◀ in the toolbar,
– or –
■ Right-click to display the dropdown Acrobat Reader menu, then select **Go Back**.

Re-do a jump

■ Click ▶▶ in the toolbar,
– or –
■ Right-click to display the dropdown Acrobat Reader menu, then select **Go Forward**.

Click

Previous page

Next page

Contents

1 Using the HP ScanJet scanner

What can you scan?

Using the scanning software, you can scan:

- color photographs
- color drawings and line art
- grayscale drawings
- black and white photographs
- black and white drawings and line art
- pages that have both pictures and text

How scanning works

During a scan, the scanner light turns on and moves across the bed. The charge-couple device (CCD) in the scanner records a digital image of the light reflected from the original you placed on the scanner bed. The recorded image is made up of 600 pixels per inch (ppi) and each pixel can have a depth of up to 36 bits.

The resulting image can potentially have millions of colors.

An image is saved for use in another program when you drag-and-drop it, save it as a file and insert the file, or copy it, then paste it into an open document.
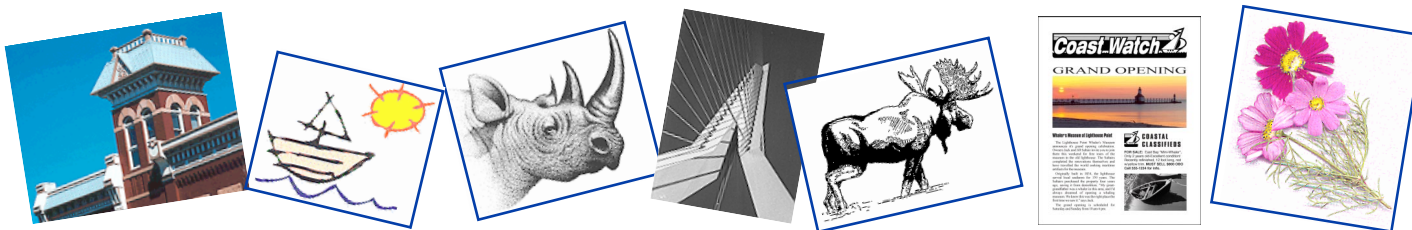
Place the picture on the scanner

The picture you want to scan must be placed face down on the scanner glass.

2 Place the picture face down on the scanner glass.

1 Lift the scanner lid and hold it up.
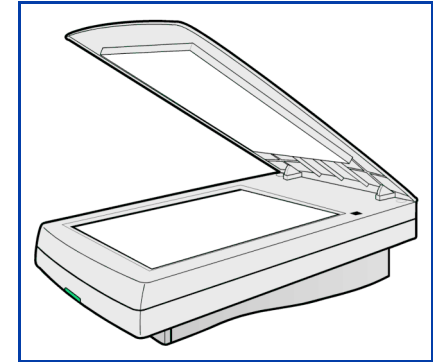
T I P

If the picture has straight edges, place the top and right edges next to the top and right edges of the scanner bed. This will make the preview image straight when you scan.

3 Close the scanner lid.
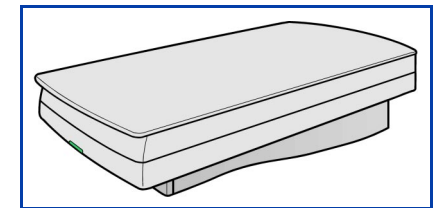
Start the scanning software

There are three ways to start the scanning software:

- push the **Scan** button on the scanner
- use the Windows **Start** menu
- launch the scanning software from another program using TWAIN (page **11**)

Pushing the button on the scanner

1 Push the **Scan** button on the scanner once.

After the scanning software window appears, the scanner automatically performs a **Preview** scan and displays the preview image.
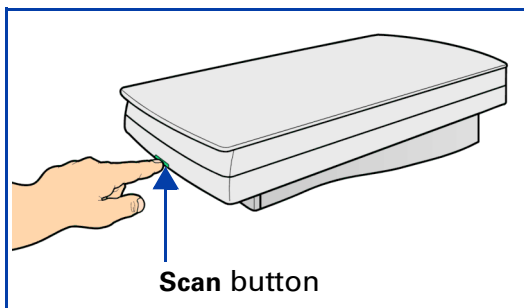
Scan button

The **Scan** button is below the lid on the front of the scanner.

TIP

> You may need to use the **HP ScanJet Button Manager** to configure the **Scan** button to set **HP PrecisionScan Pro** as the default software to launch when the **Scan** button is pushed (see page **12**).

Using the Windows Start menu

1 Select ![Start], the Windows **Start** button.

The Windows **Start** menu appears.

2 From the **Start** menu, choose **Programs**, then choose **HP ScanJet Software:HP PrecisionScan Pro**.

When the scanning software window appears, the scanner **does not** automatically perform a **Preview** scan.

3 To start a **Preview** scan:

- click ![Preview icon], the **Preview** button in the scanning software window toolbar, or

- from the **Scan** menu, select **Preview**, or
- press **Ctrl+R**.

The scanner performs a **Preview** scan and displays the preview image.

Launching from another program

If you are creating a project such as a greeting card or a calendar, and want to include a picture from a photograph, you might be able to scan the photograph directly into the program you are using. To do this, the program must have a TWAIN command such as **Acquire**, which is probably on one of its main menus.

1 Open the program in which you will place the scanned image.

2 If necessary, select the program's **Select Source** command and choose **HP PrecisionScan Pro**.

3 Select the program's TWAIN command.

After the scanning software window appears, the scanner automatically performs a **Preview** scan and displays the preview image.

4 Create a selection area in the preview image, make necessary adjustments, and select **Place Image** from the **Scan** menu. The final scan occurs and the image is placed in the calling program.

What is TWAIN?

TWAIN is an industry-standard communications protocol for sending instructions to hardware (such as a scanner) and receiving data back (such as an image). If you are using a program that supports TWAIN, you can start **HP PrecisionScan Pro** directly from that program.

- HP ScanJet scanners and HP scanning software can use TWAIN, but the programs you use to create projects may not be TWAIN-compatible.
- If a program can use TWAIN, it should have a command named **Acquire**, **Acquire Image**, or **Import** on one of its main menus, usually the **File** menu.
- Selecting one of these commands launches the scanning software selected with the **Select Source** command.
- Editable text cannot be transferred using TWAIN.

Configure the Scan button

You can use the **HP ScanJet Button Manager** to configure the **Scan** button. It is set at the factory with **HP PrecisionScan Pro** as the default scanning software to launch when the **Scan** button is pushed.
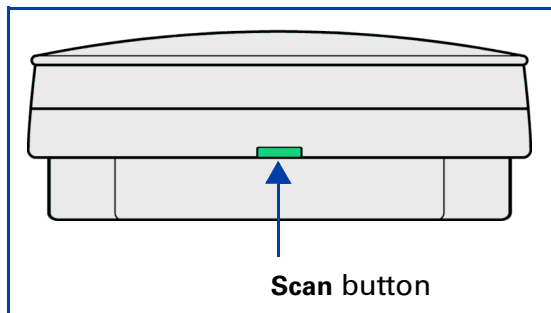
Scan button

1 Select [Start], the Windows **Start** button.

The Windows **Start** menu appears.

2 From the **Start** menu, choose **Programs**, then choose **HP ScanJet Software:HP ScanJet Utilities:HP ScanJet Button Manager**.

The **HP ScanJet Button Manager** window appears.
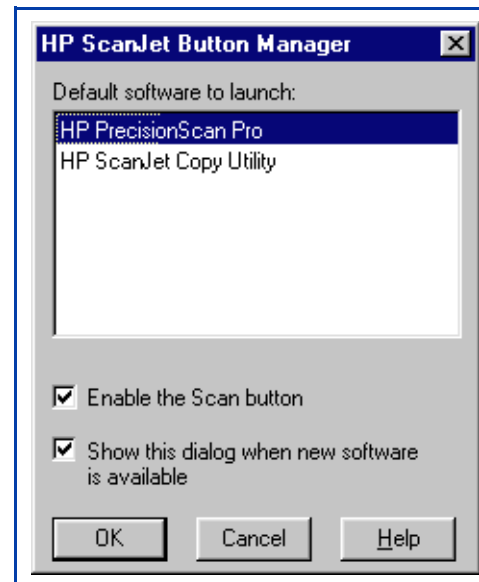
3 Click **HP PrecisionScan Pro** in the list box.

4 If necessary, click the **Enable the Scan button** checkbox to place a checkmark in it.

5 Click **OK**.

The **HP ScanJet Button Manager** window closes.

2 A tour of the scanning software

Scanning software window

This chapter describes the scanning software.

❶ **Menus —** The commands in the menus are summarized beginning on page **15**.

❷ **Toolbar —** The toolbar has buttons for the most commonly used commands (see page **20**).

❸ **Preview area —** The scanned image appears in the preview area of the scanning software window (see page **21**).

❹ **Info bar —** Displays width and height of the output image, scale percentage, the **Output Type** currently selected, and **Help** button (see page **22**).

❺ **Status bar —** Displays messages and approximate size of the selection area (**Image Size**) (see page **23**).

Image adjustment tools — The scanning software has six tools for making adjustments to the image. These tools can be placed anywhere on the Windows desktop (see page **26**).

Online Help — Help includes topics, What's This, more online manuals, and videos (see page **35**).

Scanning software window showing a **Preview** scan

❶ Menu bar
❷ Toolbar
❸ Preview area
❹ Info bar
❺ Status bar
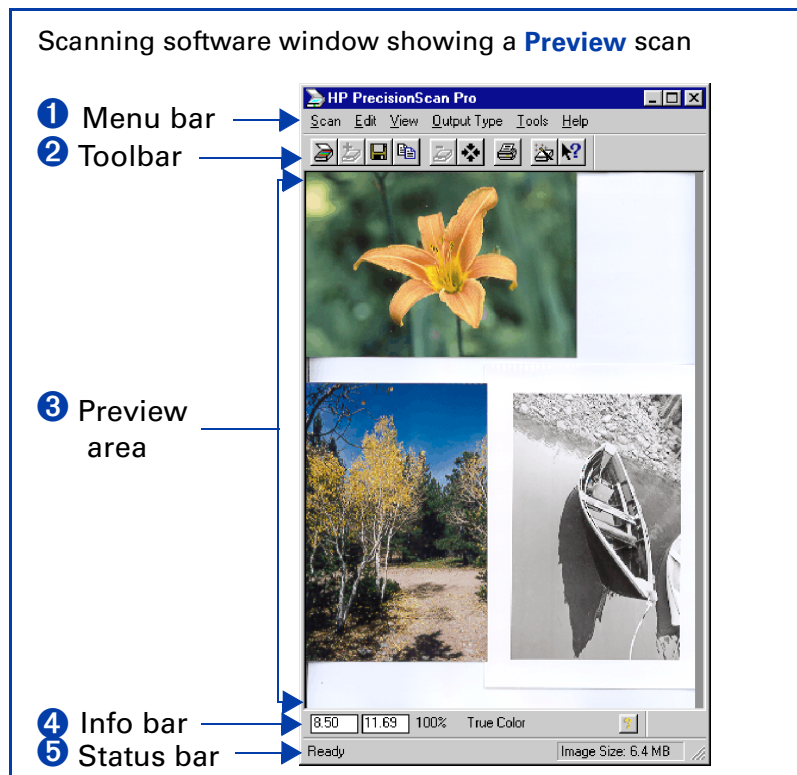
Menus

All the commands for the scanning software are available in the menus. Each menu and its commands are described in the following tables.

Scan		
Preview	**Ctrl+R**	Scans the entire area of the scanner glass at low resolution and displays the preview image (see page **50**).
Zoom		Scans and enlarges the view of the selection area (see page **56**).
Save As…	**Ctrl+S**	Displays the **Save As** dialog box, then scans the selection area and saves the image to a file (see page **100**).
Save As Whole Page…		Displays the **Save As** dialog box for saving an image containing text or a combination of text and pictures in an RTF file (see page **93**).
Place Image	**Ctrl+I**	Scans the selection area and sends the image to the TWAIN-compatible program that called it (see page **11**).
Save Settings…		Displays the **Save Settings** dialog box for saving a set of scanning settings (see page **38**).
Load Settings…		Displays the **Load Settings** dialog box for loading a set of saved scanning settings (see page **40**).
Print…	**Ctrl+P**	Displays the **Print** dialog box, then scans the selection area and sends the image to the printer (see page **96**).
Print Setup…		Displays the **Print Setup** dialog box for setting options for printing.
Preferences…		Displays the **HP PrecisionScan Pro Preferences** dialog box for setting preferences for the scanning software (see page **41**).
Exit		Closes the scanning software.

E d i t

Copy	**Ctrl+C**	Does a final scan of the selection area and copies it to the Clipboard for pasting into another program (see page **99**).
Select **A**ll	**Ctrl+A**	Draws a selection area that includes the entire area of the scanner glass (see page **54**).
Clear Selection	**Esc**	Removes the selection area (page **53**).

V i e w

Toolbar	When checked, shows the toolbar. When not checked, hides the toolbar (see page **20**).
Status Bar	When checked, shows the status bar. When not checked, hides the status bar (see page **23**).
Info Bar	When checked, shows the info bar. When not checked, hides the info bar (see page **22**).
Undo Zoom	When viewing a zoomed image, displays the existing preview image so you can create a different selection area without performing a new **Preview** scan (see page **57**).

Output Type

True Color	Scans the selection in 24-bit color (see page **66**).
Grayscale	Scans the selection in 8-bit grayscale (see page **67**).
Black & White	
Bitmap (raster)	Scans the selection as a black and white raster image (see page **67**).
Scalable (vector)	Scans the selection as a black and white vector image that can be resized in another program without losing image quality (see page **67**).
256 Color	
Web Palette	Scans the selection using colors from a standard Web palette (see page **62**).
System Palette	Scans the selection using colors from the **256 Color Web Palette** output type palette plus more shades of gray and the 16 VGA colors (see page **64**).
Optimized Palette	Scans the selection using colors from a palette that contains pixel colors present in the original (see page **63**).
Text	Scans a text selection and changes the text into unformatted, editable ASCII text (see page **90**).

Tools

Output Resolution	When checked, shows the **Output Resolution** tool, which sets the resolution for the final scan of the selection (see pages **27** and **83**).
Sharpen Level	When checked, shows the **Sharpen Level** tool, which sets the amount of sharpening for the image (see pages **29** and **68**).
Dimensions	When checked, shows the **Dimensions** tool, which contains fields for setting the width and height of the selection area, scaling, and setting the width and height of the image that will be saved, printed, copied, or dragged and dropped (see pages **30** and **58**).
Exposure Adjustment	When checked, shows the **Exposure Adjustment** tool, which sets highlights, shadows, and midtones in the image, and displays pixel distribution, pixel color, and pixel output levels (see pages **32** and **70**).
Color Adjustment	When checked, shows the **Color Adjustment** tool, which sets color balance (hue) and color saturation in the image (see pages **33** and **80**).
B & W Threshold	When checked, shows the **Black & White Threshold** tool, which sets the threshold and the color channel for an image set to the **Black & White Bitmap (raster)** output type (see pages **34**, **85**, and **87**).
Reset Controls	Resets the controls in all tools, except the **Dimensions** tool, to their optimal (default) values.

TIP

Not all tools are active for all output types.

Help

HP ScanJet Coach...	**Ctrl+W**	Explains the steps to scanning with **HP PrecisionScan Pro** (see page **36**).
Contents and Index		Displays the **Help** dialog box for **Contents**, **Index**, and **Find**.
HP PrecisionScan Pro Help	**F1**	Displays **HP PrecisionScan Pro Help** (see page **35**).
What's This Help	**Shift+F1**	Displays the **What's This Help** pointer ⬚❓ for getting Help by clicking on a tool, field, button, or menu item (see page **35**).
Show Me		Displays movies from the **HP PrecisionScan Pro** CD-ROM that demonstrate the main features of the scanning software (see page **36**).
User's Guide		Displays the *HP ScanJet PrecisionScan Pro User's Guide* in Acrobat Reader (see page **37**).
ADF Guide		Displays the *HP ScanJet Automatic Document Feeder Guide* in Acrobat Reader (see page **37**).
About HP PrecisionScan Pro		Displays the **HP PrecisionScan Pro** software version number.

TIP

Acrobat Reader was automatically installed during installation.

Toolbar

Frequently used commands appear as buttons in the toolbar.

Toolbar Buttons

Preview		Scans the entire scanner glass and displays the preview image (see page **50**).
Zoom		Scans and enlarges the view of the selection area (see page **56**).
Save As		Scans and saves the selection to a file (see page **100**).
Copy		Scans and copies the selection to the Clipboard (see page **99**).
Undo Zoom		Displays the existing preview image (see page **57**).
Reset Controls		Resets the controls in all tools except the **Dimensions** tool to their optimal (default) values.
Print		Scans and prints the selection (see page **96**).
HP ScanJet Coach		Displays an interactive introduction to scanning (see page **36**).
Help Topics		Displays the **What's This Help** pointer for getting **Help** by clicking on a tool, field, button, or menu item.

Preview area

The preview area in the scanning software window displays the:

- preview image of the entire scanner glass, or
- zoomed image of the selection area

A selection area in **Preview** scan

Selection area
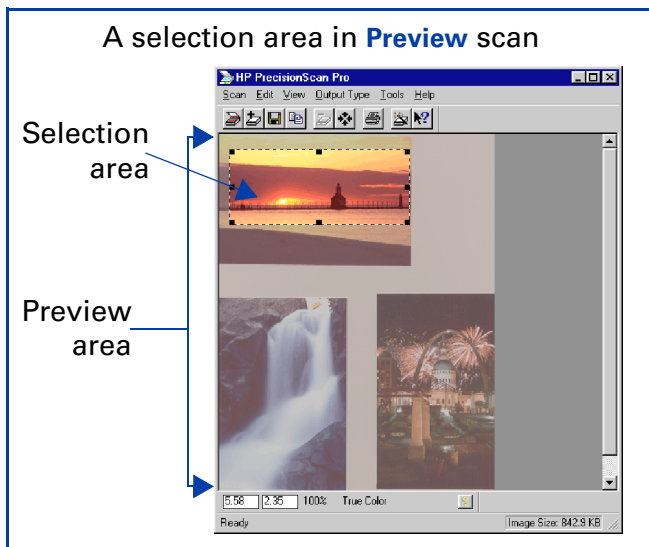
Preview area

When you **Preview** scan, the entire scanner glass area displays in the scanning software window.

Enlarging the preview area

The size of the preview area determines how big the image displays.

Enlarge the scanning software window when you want to increase the magnification of the view of a zoomed image.

Enlarged image after a **Zoom** scan

Zoomed selection area
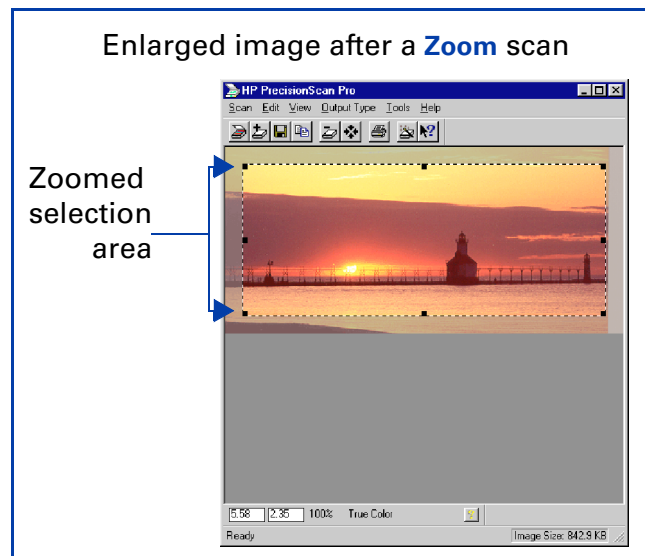
Info bar

The info bar displays the following information:

❶ the width of the output image

❷ the height of the output image

❸ scale of the output image

❹ the **Output Type** currently selected

❺ the **Help** button for **HP PrecisionScan Pro**

Scanning software window info bar
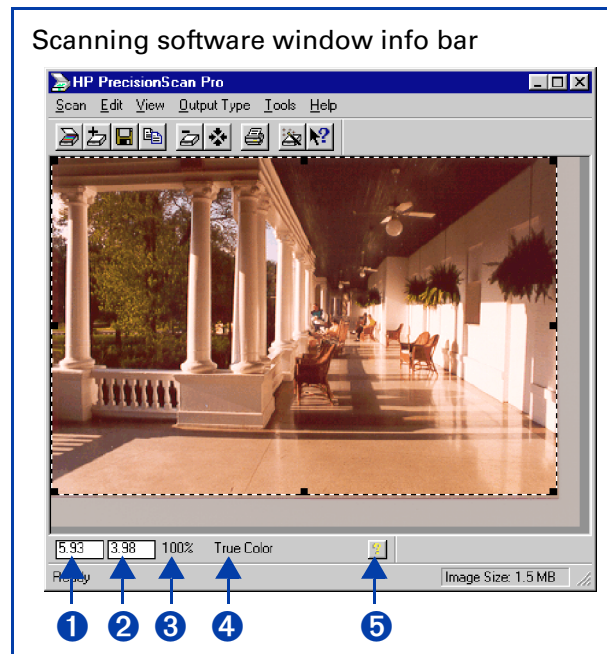
Status bar

The status bar displays the following information:

❶ a message about the action you can take when the pointer is over some part of the scanning software window or a tool

❷ the number of KB (kilobytes), MB (megabytes), GB (gigabytes), or TB (terabytes) in the image displayed in the selection area (**Image Size**)
-or-
a progress bar for showing when the scanner is scanning or the scanning software is processing a command

TIP

The **Image Size** shown in the status bar is the number of KB, MB, GB, or TB in the image displayed in the selection area.

This size is only an estimate of the actual size of the saved file. The file size depends on the format used to save the file (see page **100**) and may be larger or smaller than the **Image Size** value shown.

Scanning software window status bar
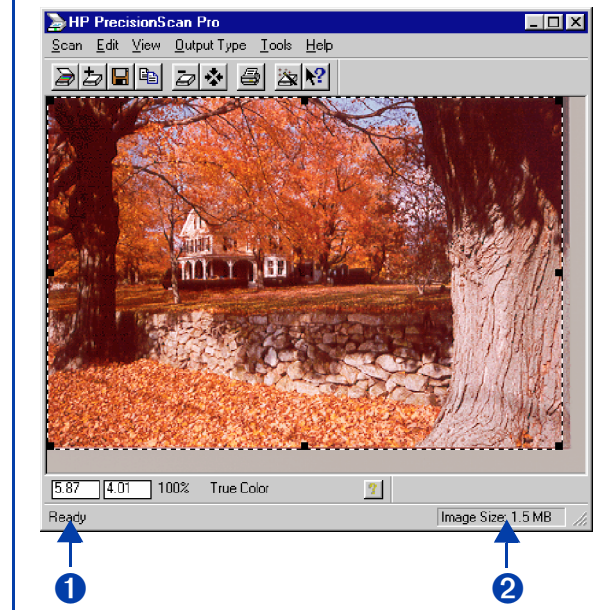
Context-sensitive pointers

The shape of the pointer indicates the type of
activity you can perform in the scanning software.

Selection area pointers

New selection area		Draw a new selection area.
Move selection area		■ Move the selection area to a new location in the preview area.
		■ Drag the selection area to another program's open document.
		■ When **Ctrl** key is pressed, drag the selection area to the Windows desktop or to a folder in the Windows **Explorer**.
Resize selection area horizontally		Drag the mouse from a handle on a side of the selection area to resize the width of the selection area.
Resize selection area vertically		Drag the mouse from a handle on the top or bottom of the selection area to resize the height of the selection area.
Resize selection area diagonally		Drag the mouse from a handle on a corner of the selection area to resize both the height and the width of the selection area.
Drop allowed		The program or folder the image has been dragged to accepts this kind of drop.
Drop not allowed		The program the image has been dragged to does not accept this kind of drop.

Ready pointer

Ready for activity		■ Click a menu item to select a command. ■ Click a list button to select a choice. ■ Click a button to turn it on or off, or to increase or decrease a number.

Typing pointer

Data entry accepted		Click, then type a value.

Pixel value pointers

White eyedropper		Position this pointer over a light area of the image to see the area's pixel value in the RGB meter and in the pixel distribution histogram in the **Exposure Adjustment** tool. Click to set the **Highlights** value.
Black eyedropper		Position this pointer over a dark area of the image to see the area's pixel value in the RGB meter and the pixel distribution histogram in the **Exposure Adjustment** tool. Click to set the **Shadows** value.

What's This Help pointer

What's This Help		Click on a tool, field, button, or menu item for pop-up **Help** on that item.

Image adjustment tools

Six tools can be used to make adjustments to the image in the selection area:

- **Output Resolution** tool (see page **27**)
- **Sharpen Level** tool (see page **29**)
- **Dimensions** tool (see page **30**)
- **Exposure Adjustment** tool (see page **32**)
- **Color Adjustment** tool (see page **33**)
- **Black & White Threshold** tool (see page **34**)

Each tool has controls you can set for applying to a final scan. Five of the tools have reset buttons for applying optimal values to their controls.

Displaying a tool

- From the **Tools** menu, select the name of the tool you want to display. A checkmark displays next to the choice in the **Tools** menu and the tool appears.

Closing a tool

- Click the **Close** button ⊠ in the tool's title bar, or from the **Tools** menu, select the name of the tool you want to hide. The checkmark disappears and the tool closes. The tool's values are still applied to the image.

Docking a tool

Two tools can be docked to the scanning software window:

- **Output Resolution** tool
- **Sharpen Level** tool

If either of these tools are docked when you close the scanning software, they will be docked the next time you start the scanning software.

To dock a tool

- Double-click somewhere in the margin of a dockable tool, or drag the tool to the toolbar.

To undock a tool

- Double-click somewhere in the margin of the docked tool.

> **T I P**
>
> You can place the tools anywhere on the Windows desktop.
> 1 Position the ⛶ pointer over the tool's title bar.
> 2 Click and drag the tool to a new location.

Output Resolution tool

The **Output Resolution** tool lets you determine the amount of data for the final scan of an image of a picture. See **Set output resolution** on page **83** for more about when to use the **Output Resolution** tool.

After you have drawn a selection area, use this tool to:

❶ change the resolution setting, if necessary

❷ reset the resolution setting to the optimal value for the current output type
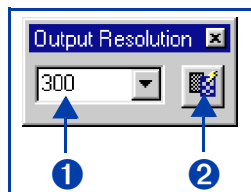
AutoResolution

When you choose an **Output Type**, the scanning software automatically applies the optimal output resolution to the selection area. For example, output resolution is automatically set to 150 when the **True Color** output type is selected, and set to 300 for the **Black & White Bitmap (raster)** output type.

To re-apply **AutoResolution**, click ⬚ in the **Output Resolution** tool.

T I P

You can add commonly-used resolution settings to the **Output Resolution** tool's list box in the **Resolution** tab of the **HP PrecisionScan Pro Preferences** dialog box (see page **46**).

Custom resolution

When you choose an output type from the **Output Type** menu, the scanning software automatically applies the optimal output resolution to the image. You may override the automatic setting by selecting a different value from the list box in the **Output Resolution** tool or by typing any value between 12 and 999,999 in the field of the **Output Resolution** tool.

Images to be displayed on a monitor

Always use **75** as the resolution setting if the image will be viewed on a monitor, such as in email or on a Web page.

Images to be printed

The resolution setting for printing images varies, depending on the output type applied to the image and the maximum resolution capability of the printer (see page **83**).

To print images of photographs with the **True Color**, **256 Color**, or **Grayscale** output types, set the value in the **Output Resolution** tool according to the following table.

	300 dpi printer	600 dpi printer	1200 dpi printer
Resolution tool setting	100	150	300

To print images of drawings with the **256 Color** or **Black & White Bitmap (raster)** output types, set the value in the **Output Resolution** tool equal to the resolution of the printer.

T I P

You can change the resolution settings available in the **Resolution** tool's list box (see page **46**).

T I P

■ When you change the resolution setting for the image of a picture, you will not see the image change in the preview area.

■ You can type any value between 12 and 999,999 in the **Output Resolution** tool.

■ If you change the resolution setting in the **Output Resolution** tool and then change the output type, you can apply **AutoResolution** for the new output type by clicking .

Sharpen Level tool

The **Sharpen Level** tool lets you enhance details in the image of a picture for the final scan. See **Sharpen** on page **68** for more about how to use the **Sharpen Level** tool.

When you choose an **Output Type** for the image of a picture, the scanning software automatically applies the optimal sharpen level.

After you have drawn a selection area, use this tool to:

❶ select a sharpen level from the list box, if necessary

❷ reset the sharpen level setting to the optimal value for the current output type
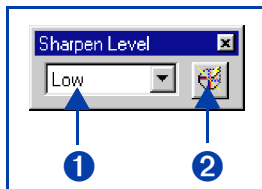
The choices in the **Sharpen Level** list box are listed in order from the least amount of sharpening to the most amount of sharpening:

- ■ **None**
- ■ **Low**
- ■ **Medium**
- ■ **High**
- ■ **Extreme**

T I P

After you select a new sharpen level in the **Sharpen Level** tool, the result of the new sharpen level can be seen in the preview area.

Grayscale output type

Medium sharpen level   **Extreme** sharpen level
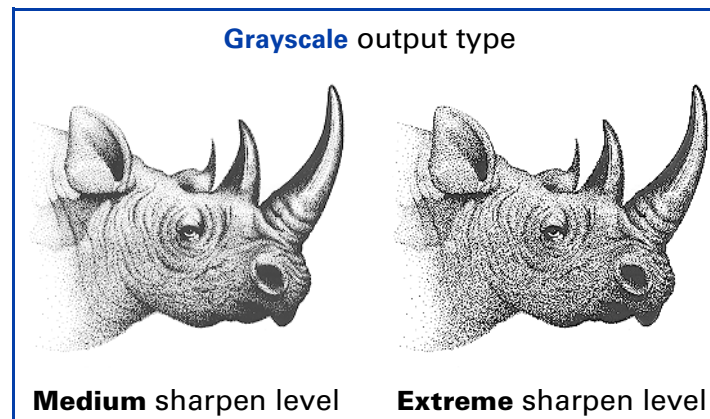
Dimensions tool

The **Dimensions** tool lets you change the size of the scanned image of a picture so that the image will be the size you want it when you use the image in another program or print it. For example, you can save a small scanned image from a larger original picture.

In the **Dimensions** tool, you can:

- set the dimensions of the selection area
- set the units for the selection area and the output dimensions
- scale the image to a percentage of the size of the original
- set the output dimensions of the image for the final scan

Original picture

50% Scaled image

Scale
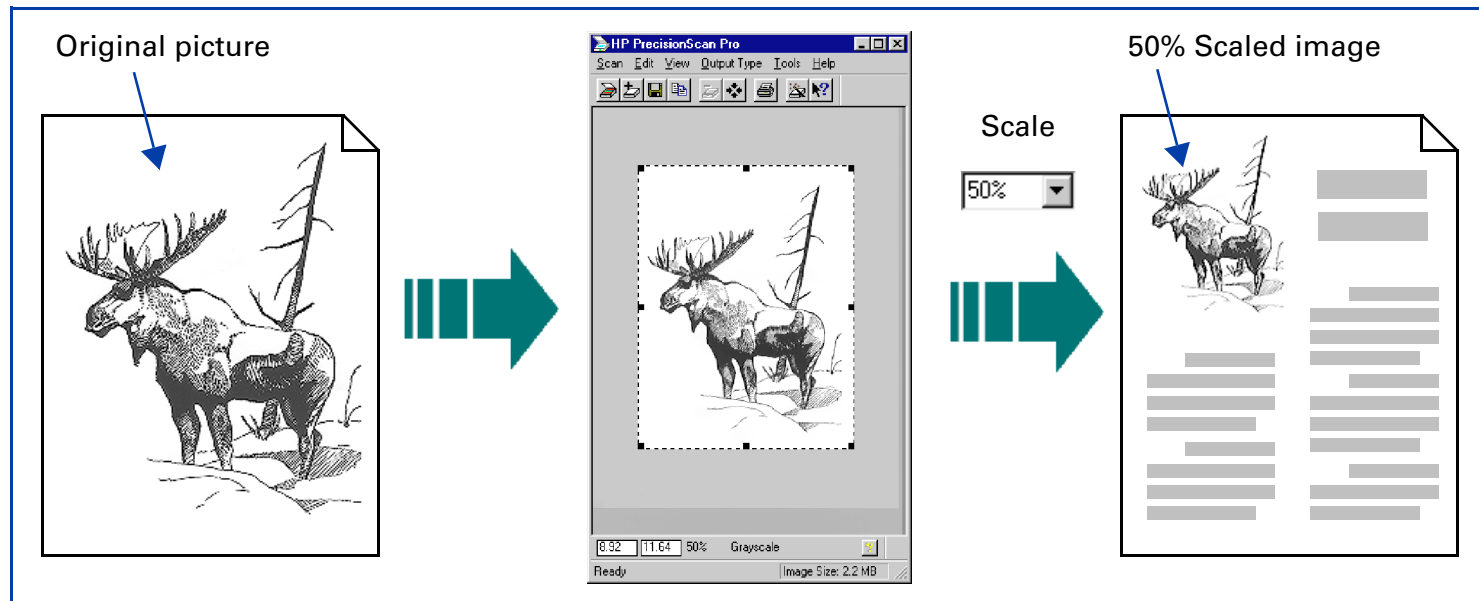
After you have drawn a selection area, use the **Dimensions** tool to:

❶ adjust the dimensions of the selection area

❷ set values for the width and height of the image to be included in the final scan

❸ select the units you want to work with

❹ enlarge or reduce output dimensions of the image for the final scan proportionally by scaling to a percentage of the original's size

❺ lock the output dimensions so you can change the dimensions of the selection area without changing the output dimensions

---
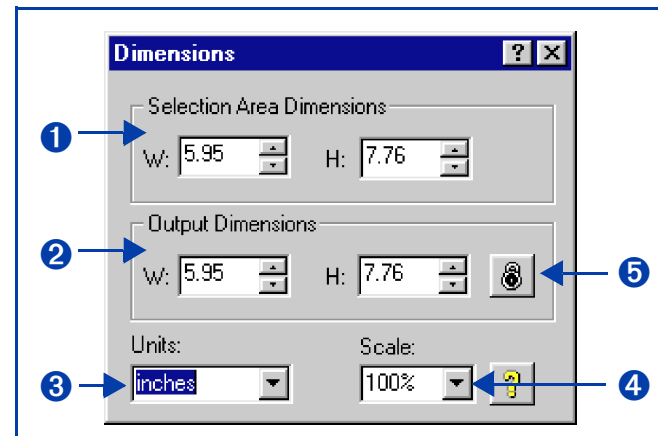
T I P

To preserve image quality when you use it in another program:

■ measure the dimensions of the area in which you will place the image, then

■ use the **Dimensions** tool in **HP PrecisionScan Pro** to scale or resize the image to fit that area.

See **Set the output dimensions** on page **58** for more about how to use the **Dimensions** tool.

Exposure Adjustment tool

The **Exposure Adjustment** tool lets you make fine adjustments to highlights, shadows, and midtones, or set the output level of black and white pixels in a color or grayscale image of a picture. See **Adjust exposure** on page **70** for more about how to use the **Exposure Adjustment** tool.

After you have drawn a selection area, use this tool to:

❶ adjust highlights in the image

❷ adjust shadows in the image

❸ adjust midtones in the image

❹ adjust output level of white pixels

❺ adjust output level of black pixels

❻ view black pixels that will be clipped in the final scan

❼ view white pixels that will be clipped in the final scan

❽ view RGB values and pixel distribution for any light or dark area of the image

❾ reset all the exposure controls to the values determined by the scanning software

> **T I P**
>
> After you change exposure settings in the **Exposure Adjustment** tool, the results of the changes can be seen in the preview area.
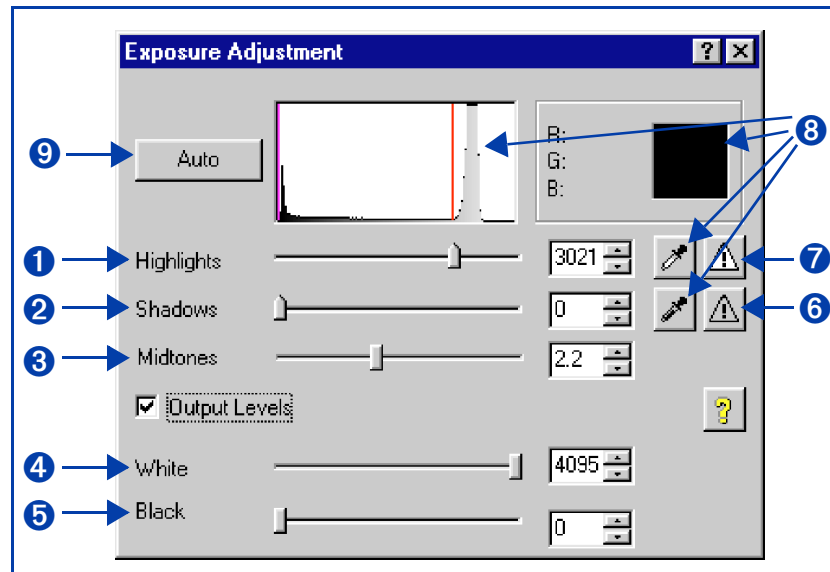
Color Adjustment tool

The **Color Adjustment** tool lets you change the hue and make colors brighter in a color image.

See **Adjust color** on page **80** for more about how to use the **Color Adjustment** tool.

After you have drawn a selection area, use this tool to:

❶ change the hue by dragging the indicator circle in the **Color Wheel** with the mouse

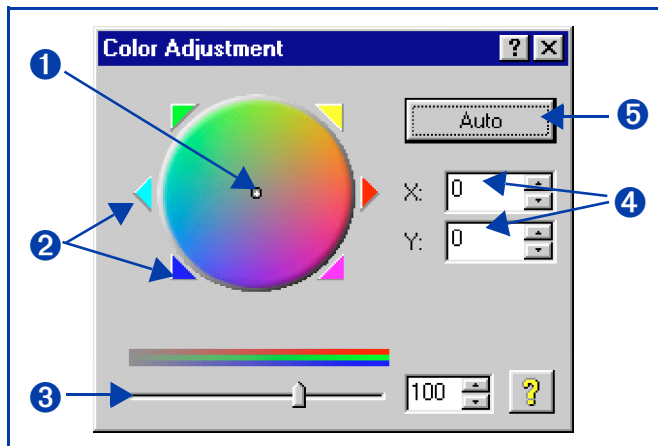❷ change the hue by clicking a color's triangle on the **Color Wheel** to move the indicator circle

❸ set color saturation between 0 and 150; the higher the saturation value, the brighter the colors

❹ change the hue by typing X and Y values for the **Color Wheel**.

❺ reset the color controls to the values determined by the scanning software

> **TIP**
>
> After you change settings in the **Color Adjustment** tool, the results of the new settings can be seen in the preview area.

Black & White Threshold tool

The **Black & White Threshold** tool lets you change the dividing point for black and white pixels in an image that uses the **Black & White Bitmap (raster)** output type. All pixels below the threshold will be output as black and all pixels above the threshold will be output as white.

After you have drawn a selection area, use this tool to:

❶ view the distribution of black and white pixels in the selection area

❷ set the black and white threshold (see page **85**)

❸ set the color channel

❹ set the black and white threshold to the value determined by the scanning software
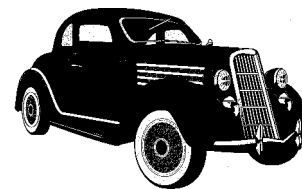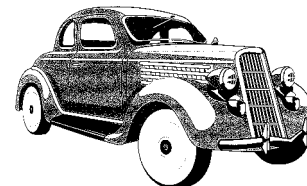

T I P
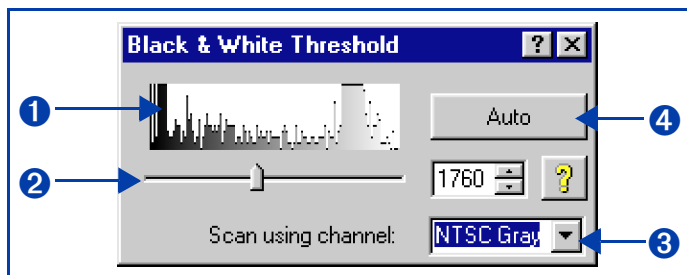
After you change settings in the **Black & White Threshold** tool, the results of the new settings can be seen in the preview area.

Black & White Bitmap (raster) output type

Default threshold setting

Low threshold setting

Online Help

Quick Help in the scanning software window

A short description, or **ToolTip**, displays when you move the pointer over of each part of the scanning software window or a tool, and a longer description displays in the status bar.

What's This Help in the scanning software window

Use **What's This Help** to learn about any object in the scanning software window.

To use What's This Help for the scanning software window

1 Click ![icon] in the toolbar, or the ![icon] in the title bar of a tool, to change the pointer to ![pointer icon] .

2 Click an item in the scanning software window or in a tool.

   A popup **Help** description appears.

You can also press **Shift+F1** to display the **What's This** pointer for the scanning software window.

To use What's This Help for a tool

1 Click ![icon] in the title bar of a tool to change the pointer to ![pointer icon] .

2 Click an item in a tool.
   A popup **Help** description appears.

HP PrecisionScan Pro Help

Use **HP PrecisionScan Pro Help** to learn about using the scanning software and the scanner.

To start Help from the Desktop

1 Select ![Start button], the Windows **Start** button.

2 From the **Start** menu, choose **Programs**, then choose **HP ScanJet Software:HP Online Help:HP ScanJet Help**.

   The **HP PrecisionScan Pro Help** window appears.

To start Help from the scanning software window

■ From the scanning software **Help** menu, select **HP PrecisionScan Pro Help** or **Contents and Index**,

   or click ![icon] in the info bar.

   The **HP PrecisionScan Pro Help** window appears.

HP ScanJet Coach

Use the **HP ScanJet Coach** to learn the steps for scanning.

To start the HP ScanJet Coach from the Desktop

1 Select ![Start], the Windows **Start** button.

2 From the **Start** menu, choose **Programs**, then choose **HP ScanJet Software:HP Online Help:HP ScanJet Coach**.

The **HP PrecisionScan Pro Help** window appears.

The **HP ScanJet Coach** appears.

To start the HP ScanJet Coach from the scanning software

■ Click ![icon] in the scanning software toolbar, or from the scanning software **Help** menu, select **HP ScanJet Coach**.

The **HP ScanJet Coach** appears.

Videos

Several videos of basic scanning concepts can be accessed from the **HP PrecisionScan Pro** CD.

1 Insert the **HP PrecisionScan Pro** CD into the CD-ROM drive.

2 Turn on the computer speakers.

To start a video from the Desktop

1 Select ![Start], the Windows **Start** button.

2 From the **Start** menu, choose **Programs**, then choose **HP ScanJet Software:HP Online Help:Show Me Videos**.

To start a video from the Help menu

1 Start the scanning software.

2 From the **Help** menu, choose **Show Me**.

To start a video from online Help

When you see ![Show Me] active at the top of a **Help** topic,

■ Click ![Show Me].

Online manuals

In addition to this *HP PrecisionScan Pro User's Guide* online manual, you can view the *HP ScanJet Automatic Document Feeder Guide* in **Adobe Acrobat Reader**, which describes how to use the HP ScanJet Automatic Document Feeder.

To view an online manual from the Desktop

1 Select ![Start] , the Windows **Start** button.

2 From the **Start** menu, choose **Programs**, then choose **HP PrecisionScan Pro:HP Online Help** and the manual.

   Adobe Acrobat Reader starts and displays the online manual.

To view an online manual from the scanning software

■ From the scanning software **Help** menu, select the manual.

   Adobe Acrobat Reader starts and displays the online manual.

Save and re-use adjustment settings

You can save the settings you have made to an image and apply those settings to a another scan during the current scanning session or after restarting **HP PrecisionScan Pro**. When you save a set of settings, you give the set of settings a name.

When you want to use those settings for a different image, load the settings using the same name (page **40**).

The settings saved are:

- ■ **Output Type**
- ■ **Dimensions** tool values (output size and output scale)
- ■ **Output Resolution** tool value
- ■ **Sharpen Level** tool value
- ■ **Exposure Adjustment** tool values
- ■ **Color Adjustment** tool values
- ■ **Black & White Threshold** tool value
- ■ the selection area, if one existed

Save Settings dialog box
Output Settings tab
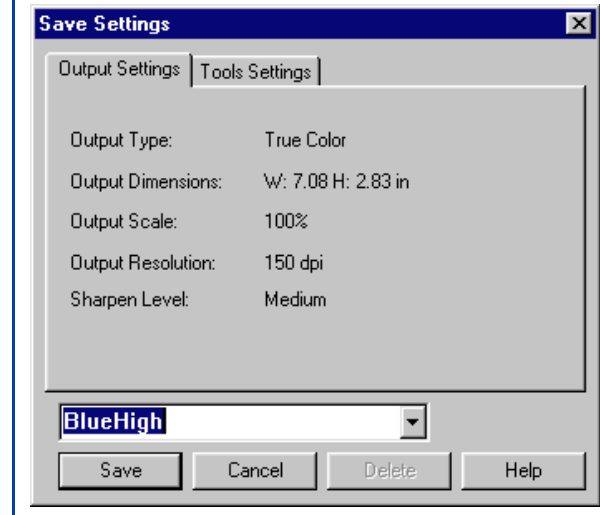
Save Settings dialog box
   Tools Settings tab
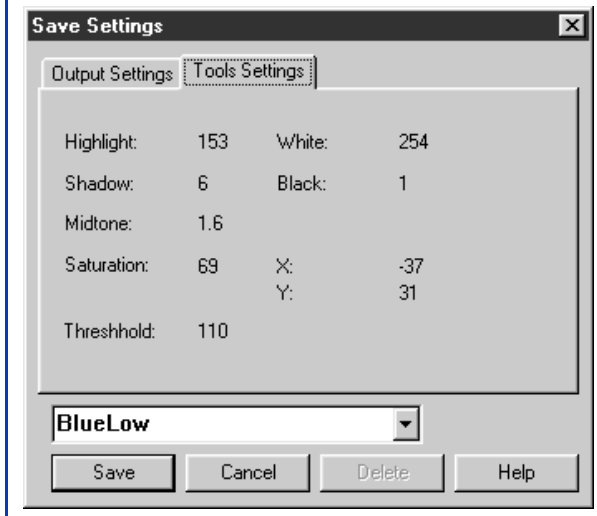
Saving a set of settings

1 From the **Scan** menu, select **Save Settings...**

The **Save Settings** dialog box appears (see page **38**).

2 Review the settings listed in the **Output Settings** and the **Tools Settings** tabs.

3 If the settings are acceptable for saving, click in the text field of the **Save Settings** dialog box, then type a name for the settings.

4 Click **Save**.

- The **Save Settings** dialog box closes.
- The named set of settings is saved for future use (see page **40**).

Loading a set of settings

Any set of scanning settings you have saved with the **Save Settings** dialog box can be applied to the image currently displayed in the preview area.

Load Settings dialog box
   Output Settings tab

The settings name is selected
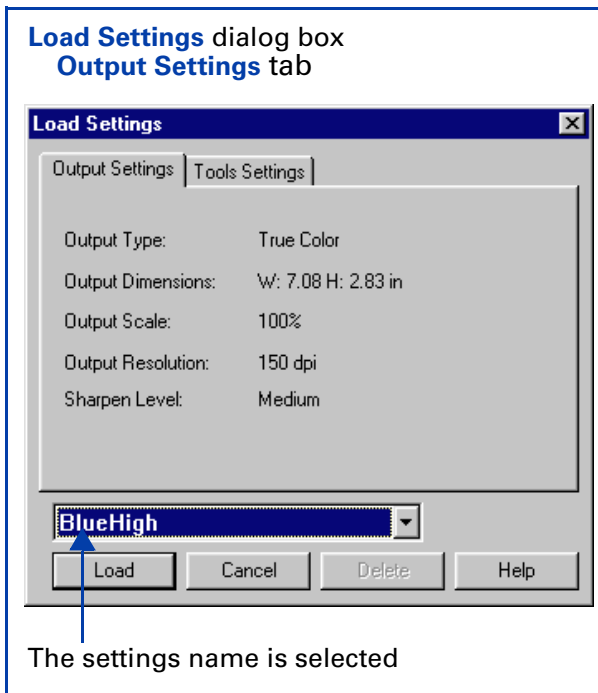
1 From the **Scan** menu, select **Load Settings...**

The **Load Settings** dialog box appears.

2 From the list box, select the name of the set of settings you want to load.

3 Review the settings listed in the **Output Settings** and the **Tools Settings** tabs.

4 If the settings are acceptable for loading, click **Load**.

- The **Load Settings** dialog box closes.
- The settings are applied to the image.

Deleting a set of settings

1 From the **Scan** menu, select **Save Settings...**

The **Save Settings** dialog box appears.

2 From the list box, select the name of the set of settings you want to delete.

3 Click **Delete**.

The **Delete setting** dialog box appears.

4 Click **Yes**.

The set of settings is deleted from the list of saved settings.

Set preferences

Preferences for the scanner and the scanning software can be set in the **HP PrecisionScan Pro Preferences** dialog box.

The **HP PrecisionScan Pro Preferences** dialog box has several tabs. These tabs are:

❶ **Scanner** (see page **42**)

❷ **Selection Area** (see page **44**)

❸ **Resolution** (see page **46**)

❹ **Controls** (see page **47**)

T I P

To activate a checkbox choice in the **HP PrecisionScan Pro Preferences** dialog box:

■ Click the checkbox to place a checkmark in it ☑.

To activate an option button choice in the **HP PrecisionScan Pro Preferences** dialog box:

■ Click the option button to place a dot in it ⦿.

Opening the HP PrecisionScan Pro Preferences dialog box

■ From the **Scan** menu, select **Preferences...**

The **HP PrecisionScan Pro Preferences** dialog box appears.

Scanner tab

The **Scanner** tab of the **HP PrecisionScan Pro Preferences** dialog box has checkboxes for enabling:

❶ a **Preview** scan when the scanner's **Scan** button is pushed (page **43**)

❷ best quality scaling (page **43**)

❸ best quality sharpening (page **43**)

❹ maximum pixel depth (page **43**)

To change settings:

1 Select the checkboxes you want to turn on or off.

2 Click **Apply**.

3 Click another tab, or click **OK** to close the **HP PrecisionScan Pro Preferences** dialog box.

All the checkbox choices in this tab are turned on
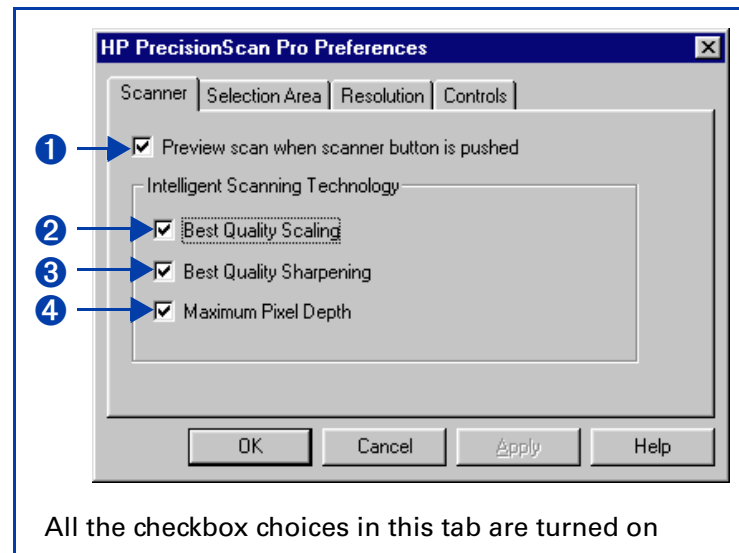
Preview scan when scanner button is pushed

When this checkbox is checked, each time you push the **Scan** button on the scanner the scanner automatically performs a **Preview** scan. This means you can start a **Preview** scan with the **Scan** button.

When this checkbox is not checked, pushing the **Scan** button on the scanner does not start a **Preview** scan. You will need to start a **Preview** scan by:

- clicking ![icon] in the toolbar

-or-

- choosing **Preview** from the **Scan** menu

Best Quality Scaling

When this checkbox is checked, the highest quality scaling is applied to the final scan.

When this checkbox is not checked, scanning is faster because normal quality scaling is applied to the final scan.

Best Quality Sharpening

When this checkbox is checked, the highest quality of sharpening is applied to the final scan.

When this checkbox is not checked, scanning is faster because normal quality sharpening is applied to the final scan.

Maximum Pixel Depth

When this checkbox is checked, the largest pixel bit depth is applied to the scan to produce the highest quality image.

When this checkbox is not checked, scanning is faster for most output types because there is less image data being processed. If your scanner is connected to a parallel port, you may see a significant improvement in performance without a large degradation in image quality when you remove the checkmark from this feature.

T I P

By default, when **HP PrecisionScan Pro** is installed, all the checkboxes are checked in the **Scanner** tab of the **HP PrecisionScan Pro Preferences** dialog box.

Selection Area tab
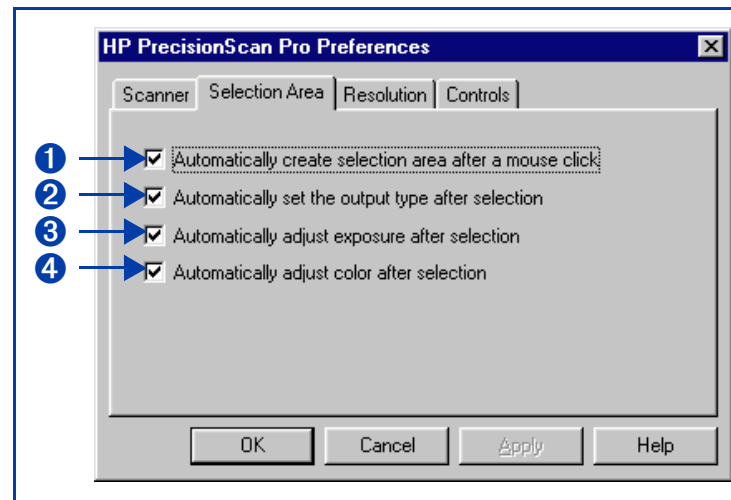
The **Selection Area** tab of the **HP PrecisionScan Pro Preferences** dialog box has checkboxes for controlling whether the scanning software should automatically:

❶ create a selection area when the mouse is clicked (page **45**)

❷ determine the best **Output Type** for the selection area (page **45**)

❸ determine the optimal exposure level for the selection area (page **45**)

❹ determine the optimal color balance and saturation for the selection area (page **45**)

To change settings:

1 Select the checkboxes you want to turn on or off.

2 Click **Apply**.

3 Click another tab, or click **OK** to close the **HP PrecisionScan Pro Preferences** dialog box.

> **T I P**
>
> By default, when **HP PrecisionScan Pro** is installed, all the checkboxes are checked in the **Selection Area** tab of the **HP PrecisionScan Pro Preferences** dialog box.

Automatically create selection area after a mouse click

When this checkbox is checked, the scanning software automatically creates a selection area when you click over a part of the image while the pointer looks like this: ┼ .

When this checkbox is not checked:

- the scanning software does not automatically create a selection area when you click over a part of the image
- you will need to draw the selection area (see page **53**)

Automatically set the output type after selection

When this checkbox is checked, the scanning software automatically changes the output type for a new selection area created by clicking (see page **52**). The scanning software determines which output type to apply based on the contents of the selection area:

- **True Color** is applied when the selection area contains enough color
- **Grayscale** is applied when the selection area contains mostly grayscale information
- **Black and White Bitmap (raster)** is applied if the selection area contains mostly black and white information

When this checkbox is not checked, the scanning software does not change the current output type when a new selection area is created. You will need to manually select the appropriate output type from the **Output Type** menu when you create a new selection area.

Automatically adjust exposure after selection

When this checkbox is checked, each time you create a new selection area by clicking (see page **52**), the scanning software automatically changes the controls in the **Exposure Adjustment** tool to the optimal values.

When this checkbox is not checked, the scanning software does not automatically reset the controls the **Exposure Adjustment** tool when you create a new selection area.

Automatically adjust color after selection

When this checkbox is checked, each time you create a new selection area by clicking (see page **52**), the scanning software automatically changes the controls in the **Color Adjustment** tool to the optimal values.

When this checkbox is not checked, the scanning software does not automatically reset the controls in the **Color Adjustment** tool when you create a new selection area.

Resolution tab

The **Resolution** tab of the **HP PrecisionScan Pro Preferences** dialog box controls the resolution values contained in the **Output Resolution** tool's list box. It has:

❶ a list of the resolution values currently available in the **Output Resolution** tool's list box

❷ an **Add** button for adding a resolution to the **Output Resolution** tool's list box

❸ a **Delete** button for deleting a resolution from the **Output Resolution** tool's list box

❹ the two resolutions that always remain in the **Output Resolution** tool's list box
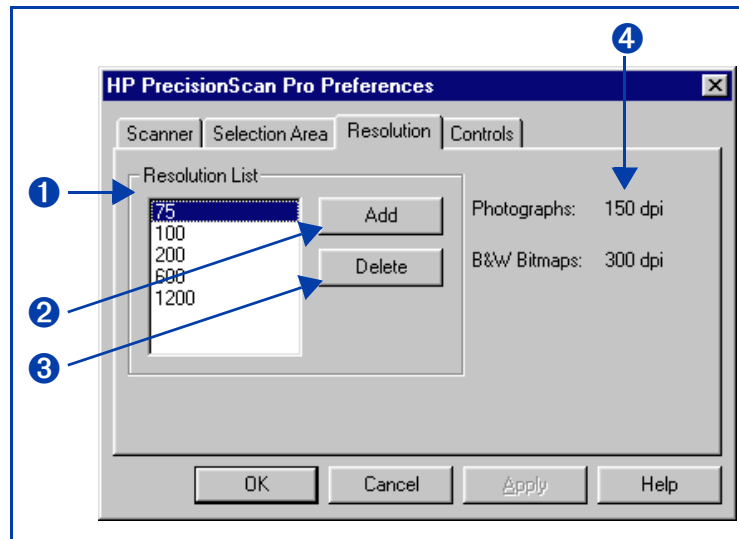
To add a resolution default:

1 Click **Add**.

2 In the **Default Resolution** dialog box, type a number between 12 and 999,999.

3 Click **OK**.

4 Click another tab, or click **OK** to close the **HP PrecisionScan Pro Preferences** dialog box.

To delete a resolution default:

1 In the **Resolution List**, select the resolution you want to delete.

2 Click **Delete**.

3 Click another tab, or click **OK** to close the **HP PrecisionScan Pro Preferences** dialog box.

Controls tab

The **Controls** tab of the **HP PrecisionScan Pro Preferences** dialog box has option buttons for selecting which control range readout to use for scanning.

❶ **8-bit readout (0-255)** — sets the scanner to use 8 bits of tonal resolution per color

❷ **10-bit readout (0-1023)** — sets the scanner to use 10 bits of tonal resolution per color

❸ **12-bit readout (0-4095)** — sets the scanner to use 12 bits of tonal resolution per color

To change settings:

1 Click the option button to select it.

2 Click **Apply**.

3 Click another tab, or click **OK** to close the **HP PrecisionScan Pro Preferences** dialog box.

The control range sets the amount of tonal resolution per color available for correction in the **Exposure Adjustment** and **Black & White Threshold** tools. Using a larger number of bits for the control range results in greater control of compensation for exposure or threshold correction.
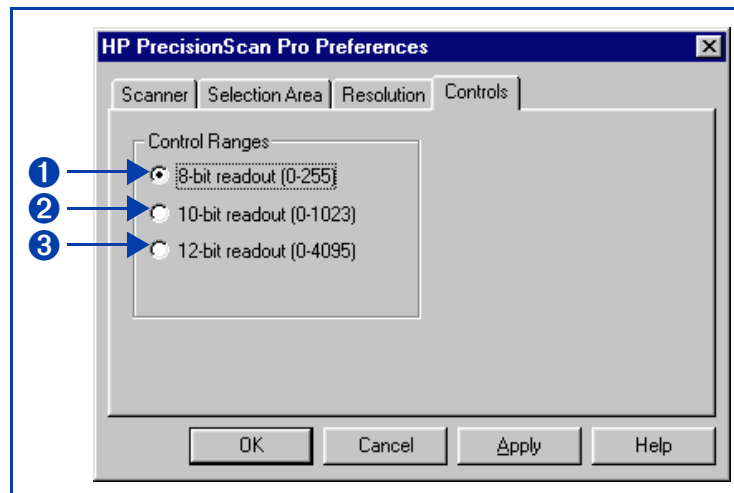
3 Scanning pictures

Basic steps for scanning pictures

Quick scan

1 **Preview** scan (page **50**).

2 Create a selection area of the part of the image you want in the final scan (page **51**).

3 Save, copy, drag-and-drop, or print (see **Chapter 6 Saving scanned images** page **94**).

TIP

Be sure to keep the original in the same place on the scanner glass until the final scan of the image is completed.

Optional adjustments

(See **Chapter 4 Adjusting images of pictures** page **65**.)

■ **Zoom** scan to see the image at closer range (page **56**).

■ Set the output dimensions if you want to save the image as a different size (page **58**).

■ Choose an **Output Type** if you need to save the image with different colors. For example, you could save a color image as a grayscale or a 256 color image (page **62**).
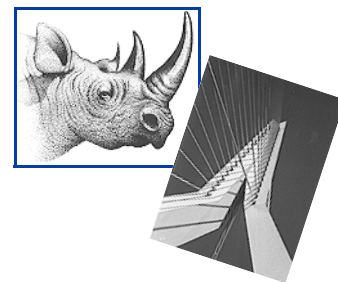
To adjust an image with the **True Color** or a **256 Color** output type:

■ Sharpen (page **68**)

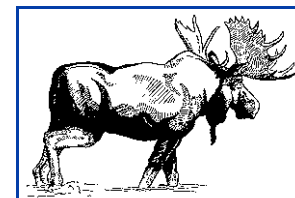■ Adjust exposure (page **70**)

■ Adjust color (page **80**)

To adjust an image with the **Grayscale** output type:

■ Sharpen (page **68**)

■ Adjust exposure (page **70**)

To adjust an image with a **Black & White** output type:

■ Sharpen (page **68**)

■ Adjust black and white threshold (page **85**) or color channel (page **87**)

Preview scan

A **Preview** scan displays a low-resolution image of everything on the scanner glass so you can create a selection area to work with (see page **51**). A final scan will be performed when the image is saved, copied, printed, or dragged to another program.

Using the Scan button to Preview scan

If the **ScanJet Button Manager** is set to communicate with **HP PrecisionScan Pro**:

■ Push the **Scan** button on the scanner once. The scanner performs a **Preview** scan and the preview image appears in the preview area.

For information on configuring the **HP ScanJet Button Manager**, see page **12**.
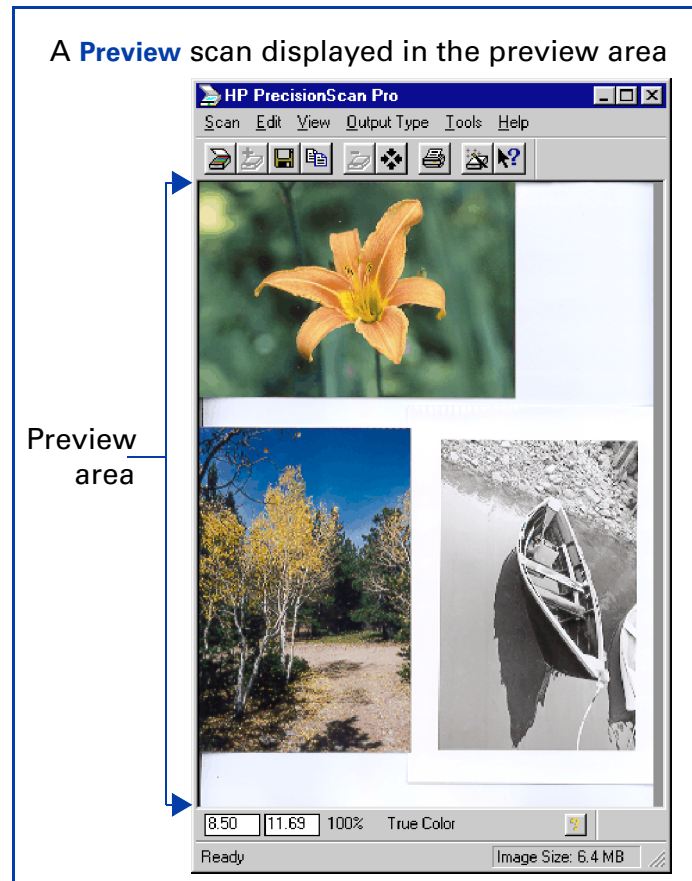
Using the scanning software to Preview scan

You can **Preview** scan from the scanning software:

■ Click ![icon], the **Preview** button in the toolbar, or
■ from the **Scan** menu, select **Preview**, or
■ press **Ctrl+R**.

The scanner performs a **Preview** scan and the preview image appears in the preview area.

A **Preview** scan displayed in the preview area

Preview area

Create a selection area

You must create a selection area to indicate the part of the image you want to save to a file, copy, print, or drag-and-drop.

The area you select will be enclosed by a selection border, which you can resize later (see page **55**).

There are several ways to create a selection area:

- click (see page **52**)
- draw (see page **53**)
- select everything on the scanner glass (see page **54**)

TIP

The selection area determines the part of the image that is included in the final scan when you save, copy, print, or drag-and-drop.

If no selection area exists:

- you cannot perform drag-and-drop
- the entire area of the scanner glass will be included when you save, copy, or print
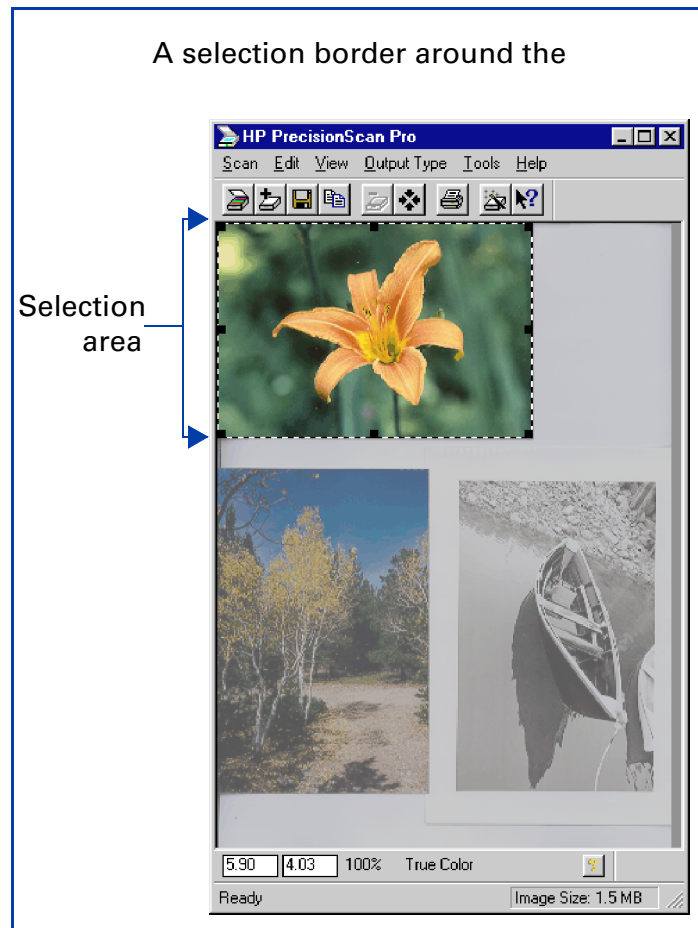
Clicking to create a selection area

1 Position the ✚ pointer near the upper-left corner of the area you want to work with.

2 Click.

A rectangular selection area is created and the parts of the preview image outside the selection area are faded to indicate they will not be included in the final scan.


T I P

To enable clicking to create a selection area enable the Selection Area preference option Automatically create selection area after a mouse click (see page **45**).

A selection border around the

Selection area

Drawing to create a selection area

1 Position the ✚ pointer over one corner of the area you want to select.

2 Press the mouse button and drag the pointer diagonally to create a selection border.

3 Release the mouse button.

Selection area

Handles
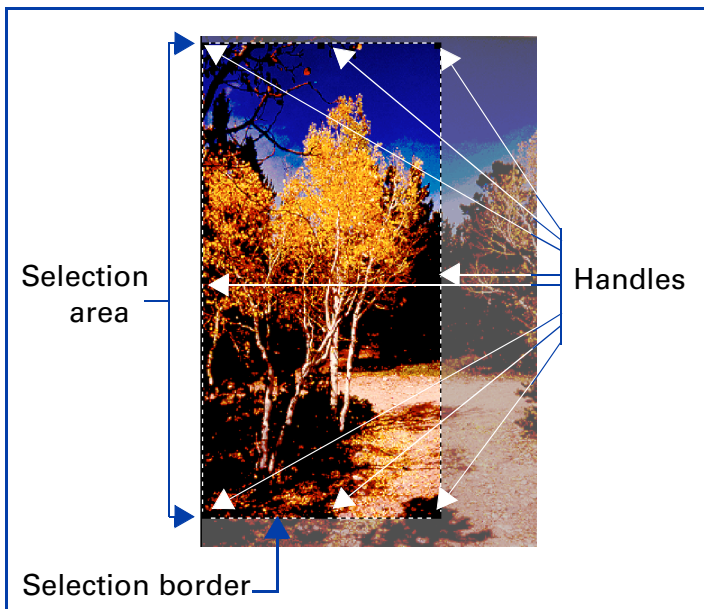
Selection border

TIP

- A dashed border surrounds the selection area.
- Handles appear on the corners and in the middle of each side of the selection border.
- The image inside the selection border remains vivid.
- The image outside the selection border appears faded.

Removing the selection area

You can delete the selection area so you can create a different one.

- From the **Edit** menu, select **Clear Selection,** or
- press **Esc**.

Selecting the entire preview area

After a **Preview** scan, use the **Select All** command to create a selection area containing the entire preview area.

■ From the **Edit** menu, select **Select All**

– or –

■ press **Ctrl+A**.

A selection border is drawn around the entire preview area.
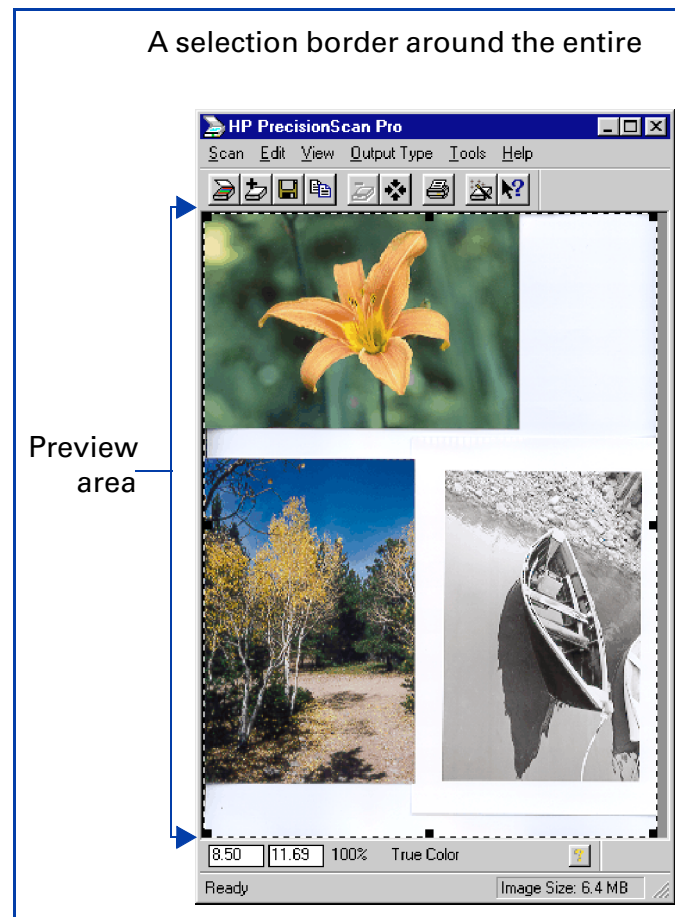
Selecting the entire zoomed area

After a **Zoom** scan, use the **Select All** command to create a selection area containing the entire zoomed area.

■ From the **Edit** menu, select **Select All**

– or –

■ press **Ctrl+A**.

A selection border is drawn around the entire zoomed area.

A selection border around the entire

Preview area

Moving the selection area

You can move the selection area to a different location in the preview area.

1 Position the pointer inside the selection area.

The pointer changes to ⊕ .

2 Drag the selection area to its new location.

Adjusting the size of selection area

You can change the size of the selection area two ways:

■ click and drag one of the handles on the selection border (see the picture on page **53**)

■ set dimensions for the selection area in the **Dimensions** tool

Use the handles on the border

1 Position the pointer over the handle on the corner or side of the selection border you need to adjust.

The pointer changes to a bidirectional arrow (see page **24**).

2 Click on the handle and drag the side of the border to a new location.

3 Release the mouse button.

Use the Dimensions tool

You can use the fields in the **Selection Area Dimensions** area of the **Dimensions** tool to define the exact size of the selection area. (See page **30** for more about the **Dimensions** tool.)

1 From the **Tools** menu, select **Dimensions**.

The **Dimensions** tool appears.

2 Click the list button in the **Units** field and select the units you want to work with.

3 To set the width of the selection area, type the width value in the **Width** field of the **Selection Area Dimensions** area.

4 To keep the same aspect ratio for the selection area (keep the **Selection Area Dimensions** area height value proportional to the new width value), press **Enter**,

-or-

to leave the existing **Selection Area Dimensions** area height value, click in any other field of the **Dimensions** tool.

Zoom scan

Zoom scan lets you view the selection area at closer range. Use the **Zoom** command to see the image better when you adjust it.

Performing a Zoom scan

1 Create a selection area (page **51**).

2 To enlarge the view of the selection area:

- Click , the **Zoom** button in the toolbar

– or –

- from the **Scan** menu, choose **Zoom**.

The scanner scans the selection area and the selection area fills the preview area.

Zoomed selection

Return to the preview image (Undo Zoom)

After you have used the **Zoom** command to enlarge the view of the selection area, you can use the **Undo Zoom** command to view the preview image without performing another **Preview** scan. This can be useful when you have several pictures on the scanner glass and you want to use each one individually.

Using Undo Zoom

Use the **Undo Zoom** command when you want to create a different selection area in the preview image.

1 Click [button], the **Undo Zoom** button in the toolbar,
   – or –

from the **View** menu, choose **Undo Zoom**.

The preview image appears with all settings preserved.

2 Select a different area of the preview image.

3 Click [button], the **Zoom** button in the toolbar,
   – or –
   from the **Scan** menu, choose **Zoom**.

The scanner scans the selection area.

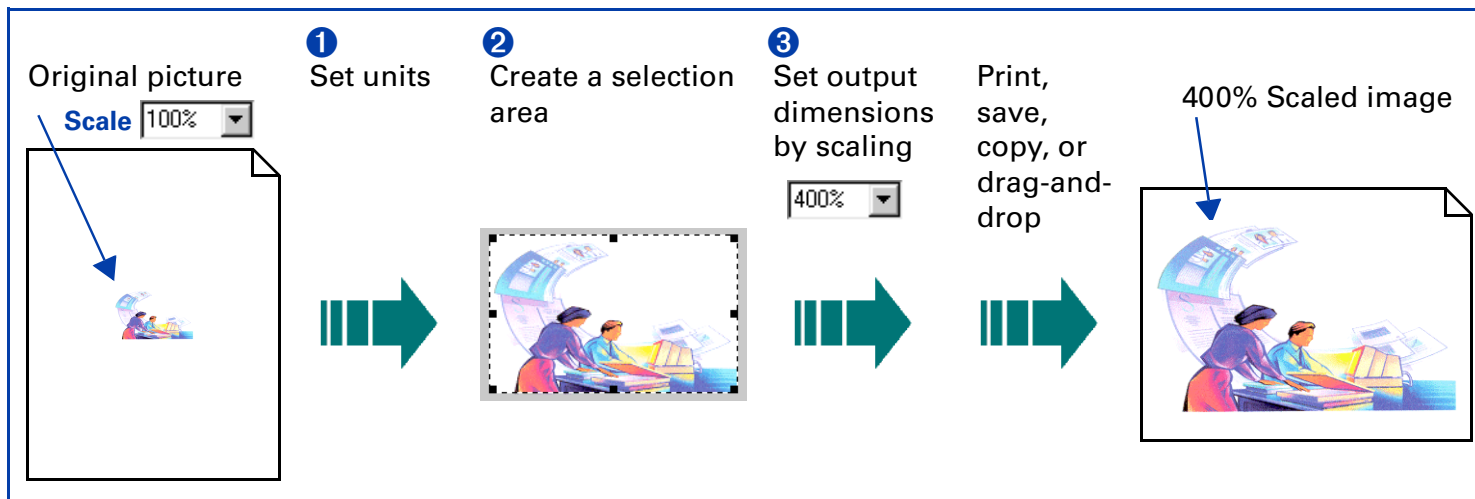The view of the new selection area appears enlarged.

Preview image	First zoomed image	Preview image	Preview image	Second zoomed image

Zoom ➡️   **❶ Undo Zoom** ➡️   **❷ Click**   **❸ Zoom** ➡️
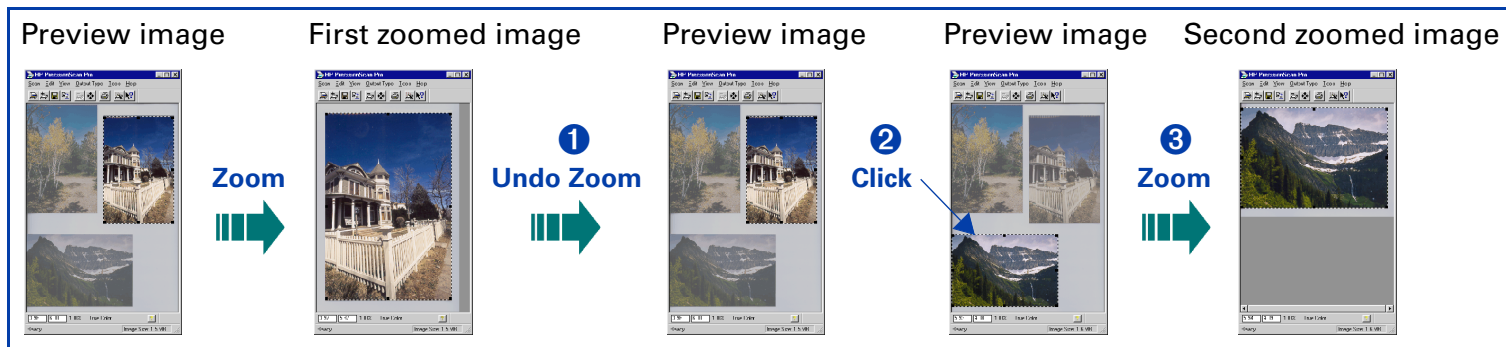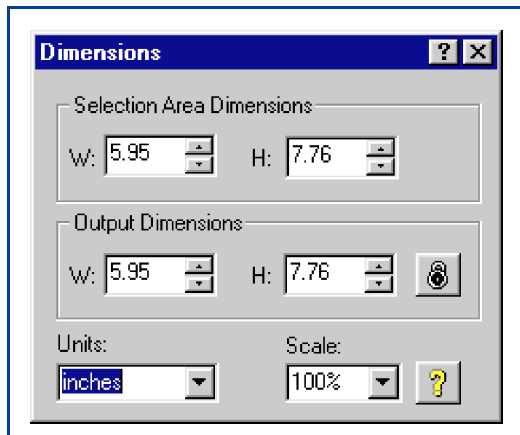
Set the output dimensions

To get the best quality image, determine in advance the physical dimensions you want for the image and set those dimensions with the **Dimensions** tool in the scanning software. For example, if the original is smaller than the size you need the image to be in another program, resize it now. Resizing an image in the destination program can cause the image to become fuzzy or jagged.

The usual procedure for setting output dimensions follows this order:

1 Choose the units of measurement you want to work with (page **59**).

2 Create a selection area (page **51**) and adjust the size of the selection area (page **55**).

3 Adjust the output dimensions (page **60**).

Original picture

Scale 100%

❶ Set units

❷ Create a selection area

❸ Set output dimensions by scaling

400%

Print, save, copy, or drag-and-drop

400% Scaled image

Setting units

The **Units** field in the **Dimensions** tool sets the units of measurement for the **Width** and **Height** fields in the **Selection Area Dimensions** and the **Output Dimensions** areas. The units available are:

- **inches**
- **centimeters**
- **points**
- **pixels**

To set units

1 Create a selection area (page **51**).

2 Click the list button in the **Units** field of the **Dimensions** tool and select a unit of measurement.

> **T I P**
>
> When you change units:
> - the output width value in both **Width** fields changes
> - the output height value in both **Height** fields changes
> - the output width value in the info bar changes
> - the output height value in the info bar changes

Scaling output as a percentage of the original

The **Scale** field is useful for setting output dimensions when you know approximately how big you want the final image to be.

For example, when you want the image to be half the size of the original, set the value in the **Scale** value to 50%. Or if you want the final image to be twice the size of the original, set the **Scale** value to 200%.

1 Create a selection area (page **51**).

2 Click the list button in the **Scale** field and select a percentage

-or-

type a value in the **Scale** field, then press **Enter**.

The new output width appears in the **Width** field in the **Output Dimensions** area and in the info bar.

The new output height appears in the **Height** field in the **Output Dimensions** area and in the info bar.

The new scale percentage appears in the **Scale** field and in the info bar.

The new image size displays in the **Image Size** box in the status bar.

The selection area remains the same.

T I P

When you change the **Scale** value, you will not see the image change in the preview area.

Image output when **Scale** is set to 100%
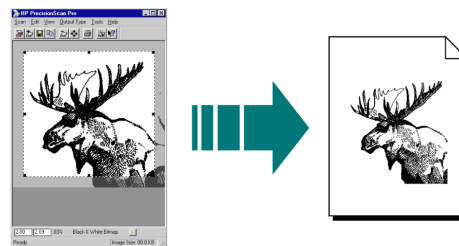
Image output when **Scale** is set to 50%
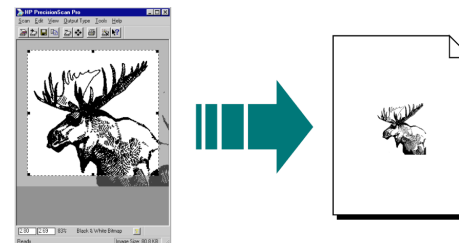
Typing values for output width and height

You can type the output dimensions when you know exactly how big you want the final image to be.

1 Create a selection area (page **51**).

2 Click in the **Width** field of the **Output Dimensions** area of the **Dimensions** tool and type the value for the width

3 Press **Tab** or **Enter**,

– or –

click in the **Height** field of the **Output Dimensions** area and type the value for the height, then press **Tab** or **Enter**.

- The new output width appears in the **Width** field of the **Output Dimensions** area and in the info bar.
- The new output height appears in the **Height** field of the **Output Dimensions** area and in the info bar.
- The new scale percentage appears in the **Scale** field and in the info bar.
- The new image size displays in the **Image Size** box in the status bar.
- The selection area remains the same.

Locking values for output dimension

You can lock the output dimensions you have defined so you can change the size of the selection area without changing the output dimensions.

1 Create a selection area (page **51**).

2 Set the values for width and height in the **Output Dimensions** area of the **Dimensions** tool.

3 Click ⚷ .

4 Adjust the size of the selection area (see page **55**).

The selection area will be resized proportionally.

The output dimensions remain the same.

Choose an output type

The output type selected in the **Output Type** menu determines the bit depth and color palette applied to the final scan of pictures and drawings, but not for images that will be converted to text. The table on page **64** lists bit depths and color palettes for each output type that is appropriate for images of pictures and drawings.
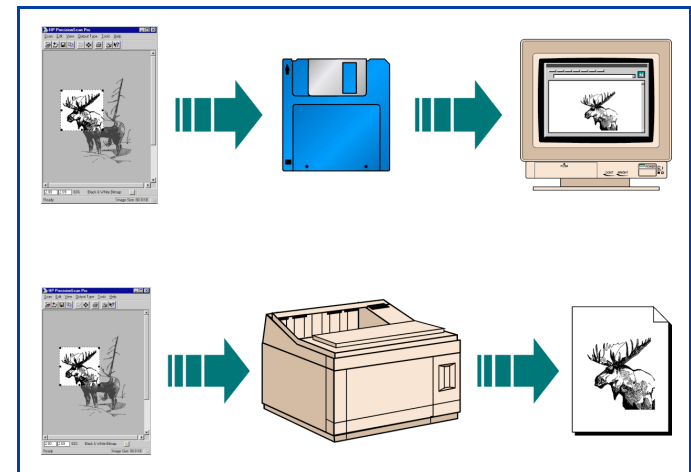
Output types for pictures

True Color	24-bit, millions of colors
Grayscale	8-bit, 256 shades of gray
Black & White	1-bit black and white
Bitmap (raster), Scalable (vector)	
256 Color	8-bit, 256 colors
Web Palette	
System Palette	
Optimized Palette	

The scanning software automatically selects an appropriate output type based on the contents of the selection area. The current output type setting displays in the info bar of the scanning software window.

However, the output type selected by the scanning software may not be the most appropriate for the way you will use the image. For example, when you want to print the image of a color photograph on a black and white printer, you may want to set the output type to **Grayscale**.

Some output types are more suitable for images that will be displayed on a monitor, others are more suitable for printing.

The table on page **64** lists results you can get with each output type for various types of originals.

Changing the output type

1 Create a selection area (page **51**).

2 From the **Output Type** menu, choose an output type for the image of the picture you scanned.

Make your output type choice based on:
- whether the image will be displayed on a monitor or printed in hardcopy
- how many colors you want in the final scan
- file size

After you select an output type from the **Output Type** menu:
- you will see the image change in the preview area
- the new output type displays in the info bar
- the new image size displays in the status bar
- a new sharpening level may appear in the **Sharpen Level** tool
- a new value may appear in the **Output Resolution** tool

T I P

For best results with images that will be used on 256-color display monitors, do not use the **256 Color Optimized Palette** output type.

When an optimized palette is used in an image:
- that palette is unique to that image and the unique palette colors are applied to the window that is displaying the image
- colors in other windows that are displayed at the same time will be corrupted, because those other windows use a standard, system palette
- the window displaying the image with the optimized palette will be temporarily rendered with fewer colors when focus changes to a different window

Suggestions for choosing output type

Output Type		Type of original			
		Color photograph	Color drawing	Black and white photograph	Black and white drawing
True Color millions of colors (24-bit color)		best color image for printing		one-color tint image for printing	
Grayscale 8-bit (256 shades of gray)		grayscale image for printing or displaying on a monitor			
Black & White 1-bit black and white (only black and white)	**Bitmap (raster)**	black and white raster image for printing or displaying on a monitor; not appropriate for resizing in another program			
	Scalable (vector)	scalable black and white vector image for resizing in another program			
256 Color 8-bit color (256 shades of color)	**Web Palette**	best color for displaying images on a Web page		one-color tint image for displaying on a Web page	
	System Palette	best color for displaying wallpaper, multiple images, or a presentation on a monitor		one-color tint image for displaying a presentation on a monitor	
	Optimized Palette	best for selecting the colors closest to those in the image			

4 Adjusting images of pictures

Tools for making adjustments

The tools in the scanning software can be used to adjust the image of a picture before you save, copy, drag-and-drop, or print the image.

After you have selected an output type (page **62**) and cropped the image by creating a selection area (page **51**), the adjustments you can make and the tools to use are:

Adjustment	Tool
■ sharpening	**Sharpen Level**, page **68**
■ exposure	**Exposure Adjustment**, page **70**
■ color	**Color Adjustment**, page **80**
■ resolution	**Output Resolution**, page **83**
■ black and white threshold	**Black & White Threshold**, page **85**

T I P

To get the best scanned image, use the tools in the scanning software to make adjustments instead of making adjustments in another program.

How output type affects which image adjustments you can make

The tools available for making adjustments to an image of a picture depend on the **Output Type** you have selected.

Adjustments for color output types

An image with the **True Color** or a **256 Color** output type can be adjusted for:

■ sharpening

■ exposure

■ color

■ resolution

Adjustments for Grayscale output type

An image with the **Grayscale** output type can be adjusted for:

■ sharpening

■ exposure

■ resolution
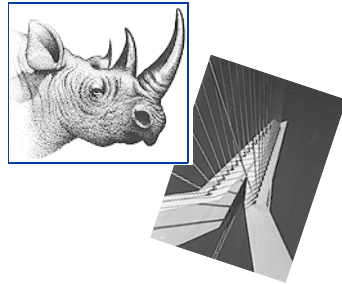
Adjustments for Black & White Bitmap (raster) output type

An image with the **Black & White Bitmap (raster)** output type can be adjusted for:

■ sharpening

■ resolution

■ black and white threshold
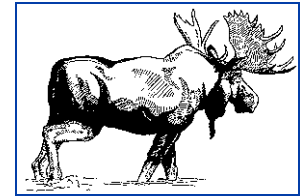
Adjustments for Black & White Scalable (vector) output type

An image with the **Black & White Scalable (vector)** output type cannot be adjusted with any of the tools.

Sharpen

The right amount of sharpening enhances detail in the scanned image. Too much or too little sharpening can accent flaws and emphasize undesirable patterns in images of photographs, drawings, or line art.

If the original picture is not sharp, or you want to create a special effect, you can increase or decrease sharpening with the **Sharpen Level** tool. The sharpen level you select will be applied to the final scan.

Grayscale output type

Medium sharpen level   **Extreme** sharpen level

See page **29** for more about the **Sharpen Level** tool.

T I P

The scanning software automatically selects the optimal sharpen level for the output type applied to the image.
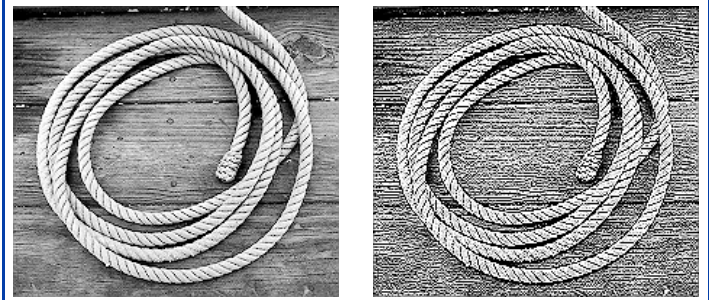
True Color output type
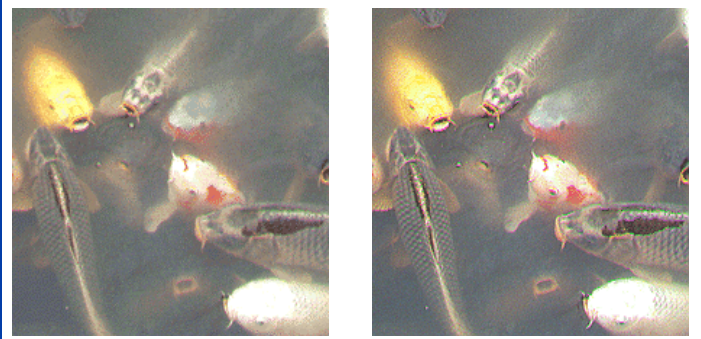
Medium sharpen level   **High** sharpen level

Changing the sharpen level

1 From the **Tools** menu, select **Sharpen Level**.

The **Sharpen Level** tool appears (see page **29**).

2 Click the list box button, drag to the sharpen level you want, then release the mouse button,

– or –

Click in the sharpen level text field and type the first letter of a sharpen level.

- The new sharpen level is applied.
- The result of the change to the sharpen level can be seen in the preview area.
- The **AutoSharpen** button in the **Sharpen Level** tool becomes active.

Black & White Bitmap (raster) output type
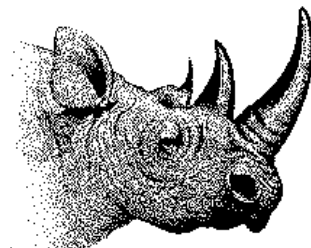
None sharpen level   **Extreme** sharpen level

T I P

- When you change the sharpen level for the image of a picture, you will see the image change in the preview area.
- If you change the sharpen level in the **Sharpen Level** tool and then change the output type, you can apply **AutoSharpen** for the new output type by clicking .

Applying the default sharpen level

- Click , the **AutoSharpen** button in the **Sharpen Level** tool.
  - The optimal sharpen level determined by the scanning software is applied to the **Sharpen Level** tool.
  - The result of the change to the sharpen level can be seen in the preview area.

Adjust exposure

The scanning software automatically selects the optimal exposure settings for the output type applied to the image of a picture. However, if the original picture needs the brightness or contrast adjusted, you can use the **Exposure Adjustment** tool to increase or decrease:

■ highlights (see page **71**)

■ shadows (see page **72**)

■ midtones (gamma) (see page **73**)

■ clipping of white and black pixels (see page **76**)

■ output levels for white and black pixels (see page **78**)

The exposure settings you select will be applied to the final scan.

You can also use the **Exposure Adjustment** tool to:

■ view the distribution of pixels (see page **74**)

■ read the RGB values of the pixels in the image (see page **74**).

The **Exposure Adjustment** tool is active for the color and grayscale output types.

Using the Exposure Adjustment tool

1 From the **Tools** menu, select **Exposure Adjustment**.

The **Exposure Adjustment** tool appears. (See page **32**.)

2 Refer to the following sections for using the **Exposure Adjustment** tool:

■ **Changing highlights** on page **71**

■ **Changing shadows** on page **72**

■ **Changing midtones (brightness)** on page **73**

■ **Checking for clipping of pixels** on page **76**

■ **Setting pixel output levels** on page **78**

Applying the default exposure settings

■ Click the **Auto** button in the **Exposure Adjustment** tool.

• The optimal exposure settings determined by the scanning software are applied to the **Exposure Adjustment** tool.

• The results of the changes to the exposure settings can be seen in the preview area.

Changing highlights

The **Highlights** control in the **Exposure Adjustment** tool lets you select the lightest printable value in the image. This gives coverage to areas that would otherwise remain the color of the paper. You may change highlights to:

■ lighter to bring out details

■ darker to minimize details

The range for the number in the **Highlights** field is set in the **Preference Controls** tab (see page **47**).

Highlights control — slider — field — UP spin button — DOWN spin button — 215

T I P
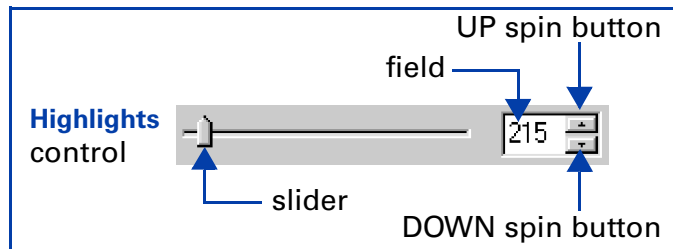
You can change the amount of tonal resolution per color available for correction in the **Exposure Adjustment** tool (see page **47**).

Bringing out details in light areas

To bring out details in the light areas of the image, decrease the number in the **Highlights** field:

■ Click on the left side of the slider,
– or –

■ type a lower number in the **Highlights** field, then press **Tab** or **Enter**,
– or –

■ click the DOWN spin button next to the **Highlights** field.

Highlights set at 215   **Highlights** set at 122
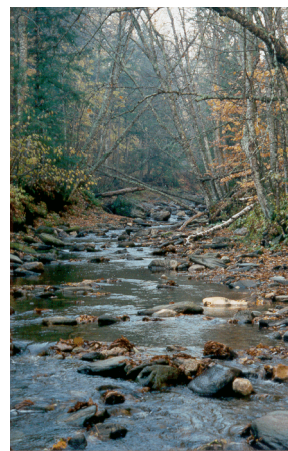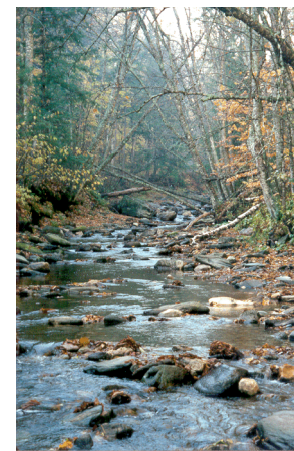
Changing shadows

The **Shadows** control in the **Exposure Adjustment** tool lets you select the darkest printable value in the image. This allows you to bring out detail in areas that would otherwise become black. You may make dark parts of images:

- lighter to bring out details
- darker to minimize details

The range for the number in the **Shadows** field is set in the **Preference Controls** tab (see page **47**).

Shadows control — slider — field — UP spin button — DOWN spin button

---
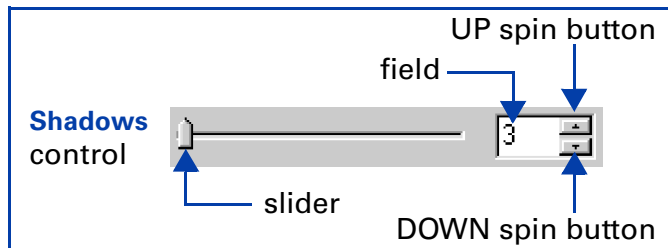
T I P

A **Shadows** value close to or at zero generally produces an image with better shadow detail.

Bringing out details in dark areas

To bring out details in the dark areas of the image, decrease the number in the **Shadows** field:

- Click on the left side of the slider,
  – or –
- type a lower number in the **Shadows** field, then press **Tab** or **Enter**,
  – or –
- click the DOWN spin button next to the **Shadows** field.

  The result of the change to **Shadows** can be seen in the preview area.
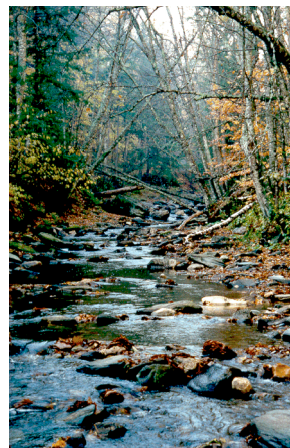
Shadows set at 10   **Shadows** set at 3
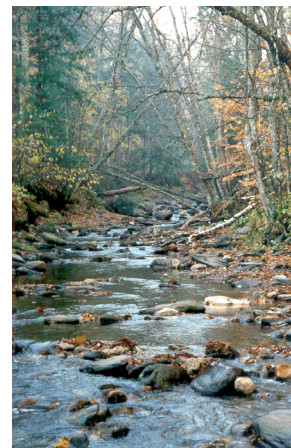
Changing midtones (brightness)

The **Midtones** control in the **Exposure Adjustment** tool lets you brighten or darken an image overall by changing the gamma value.

The range for the number in the **Midtones** field is 1.0 to 4.0.

UP spin button

field

Midtones control

slider

DOWN spin button
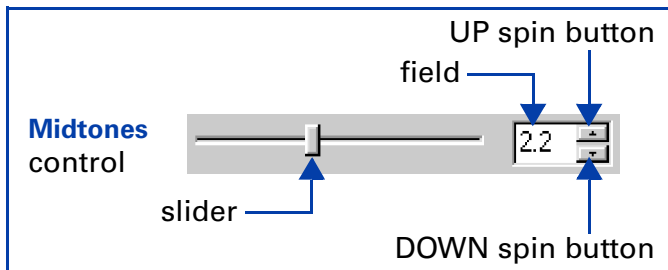
T I P

If you will be sharing the image with others, the **Midtones** value 2.2 is recommended, since the brightness of monitors varies.

Brightening the image

To brighten the image overall, increase the number in the **Midtones** field:

- Click on the right side of the slider,
  – or –
- type a higher number in the **Midtones** field, then press **Tab** or **Enter**,
  – or –
- click the UP spin button next to the **Midtones** field.

  The result of the change to **Midtones** can be seen in the preview area.
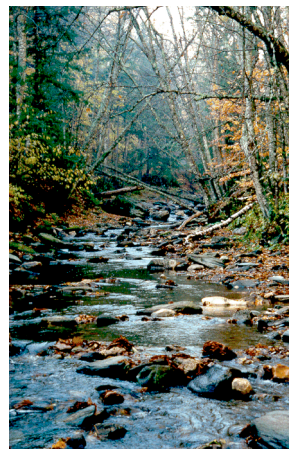
Midtones set at 2.2   **Midtones** set at 3.0
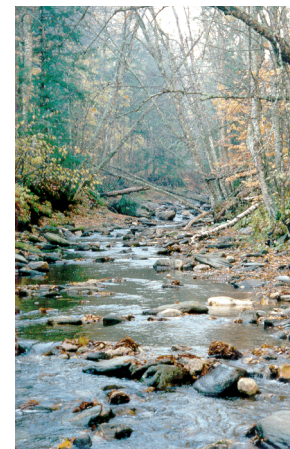
Pixel distribution histogram

The histogram in the **Exposure Adjustment** tool is a graph of the distribution of pixels in the selection area. The vertical lines in the histogram show the current settings for **Shadows** and **Highlights**.

❶ The magenta line in the histogram represents the current setting for **Shadows**, the darkest areas in the image.

❷ The red line in the histogram represents the current setting for **Highlights**, the lightest areas in the image.

❸ The turquoise line appears in the histogram when either eyedropper pointer is positioned over the image. It shows you where the pixels at that place in the image occur in the histogram.
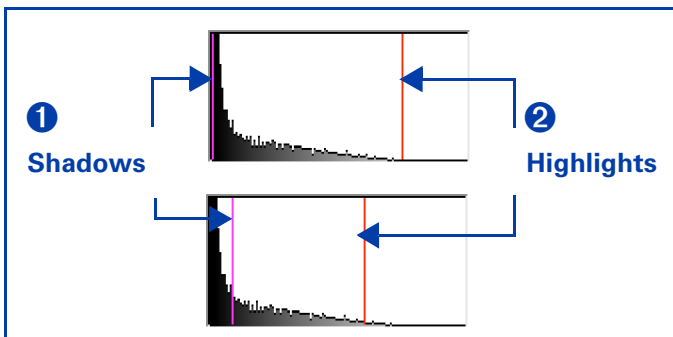
T I P

■ Changing the settings for **Highlights** and **Shadows** does not change the graph in the histogram.
■ Changing the selection area changes the graph in the histogram.
■ The **Midtones** setting is not represented in the histogram.
■ The graph in the histogram represents pixel distribution in the input image, not in the image that will be output.

❶ **Shadows**   ❷ **Highlights**

❸ Pixels under the eyedropper pointer
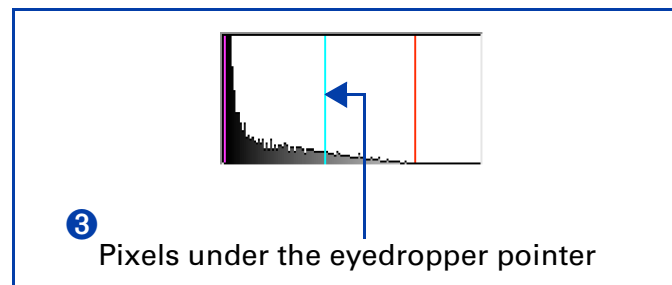
RGB Meter

You can view the RGB values and pixel color for any spot in a color or grayscale image with the **RGB Meter** in the **Exposure Adjustment** tool.

❶ RGB values
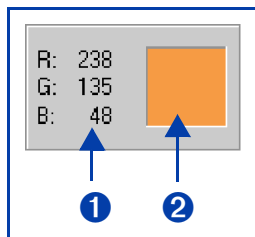
❷ Pixel color

Using the RGB Meter

1 Click either eyedropper button in the **Exposure Adjustment** tool:

■ When you click [icon], the pointer changes to this: [icon] .

■ When you click [icon], the pointer changes to this: [icon] .

2 Move the pointer over the image.

- The RGB values and pixel color appear in the **RGB Meter**.
- The turquoise line appears in the histogram.

3 Click the same eyedropper button again.

- The **RGB Meter** dims.
- The pointer returns to normal.

T I P
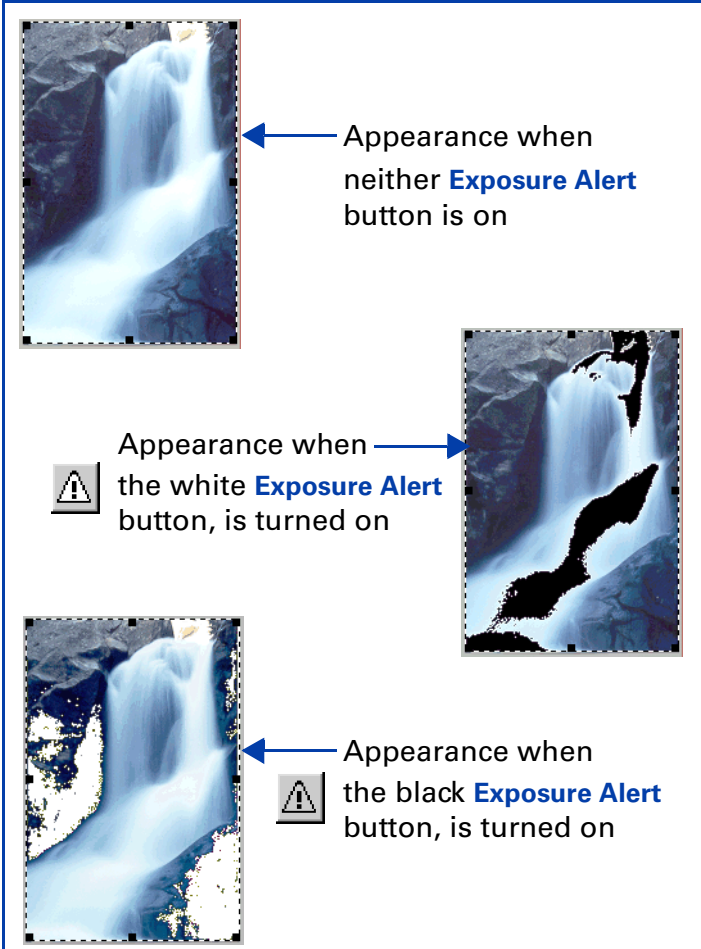
Do not click while the eyedropper pointer is over the image unless you want to change the setting for **Highlights** or **Shadows**.

Checking for clipping of pixels

The **Exposure Alert** buttons in the **Exposure Adjustment** tool warn you of areas of a color or grayscale image that contain no detail in the lightest and darkest areas of the image. The lightest area will print as the color of the paper, with no ink or toner, and therefore no detail. The darkest areas will print with the blackest color of ink or toner, saturating the area with the same color of black with no visible detail.

The **Exposure Alert** buttons in the **Exposure Adjustment** tool are:

■ [icon] – for viewing white pixels that will be clipped in the final scan

■ [icon] – for viewing black pixels that will be clipped in the final scan

Appearance when neither **Exposure Alert** button is on

Appearance when the white **Exposure Alert** button, is turned on

Appearance when the black **Exposure Alert** button, is turned on

Viewing and removing clipped light areas

You can adjust the light or dark areas to add detail back to them.

1 Click ⚠, the white **Exposure Alert** button.

The light areas in the image that will print as pure white appear black in the preview area.

2 In the **Highlights** control, click the UP spin button repeatedly until the clipped pixels disappear from the image.
The result of the change to **Highlights** can be seen in the preview area.

3 Click ⚠, the white **Exposure Alert** button again.

The **Exposure Alert** button turns off.

Viewing and removing clipped dark areas

1 Click ⚠, the black **Exposure Alert** button.

The dark areas in the image that will print as pure black appear white in the preview area.

2 In the **Shadows** control, click the DOWN spin button repeatedly until the clipped pixels disappear from the image.
The result of the change to **Shadows** can be seen in the preview area.

3 Click ⚠, the black **Exposure Alert** button again.

The **Exposure Alert** button turns off.

Setting pixel output levels

The **Output Levels** control in the **Exposure Adjustment** tool lets you create interesting effects for images of pictures.

When you change the **White** output level value to 0 and the **Black** output level value to 255, the colors in the image reverse.

Appearance with
White control = 255
Black control = 0

Appearance with
White control = 0
Black control = 255
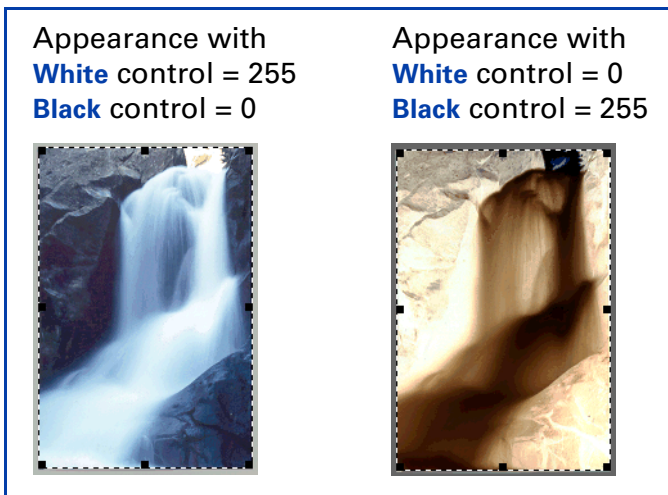
Changing output levels

Use the **Output Levels** control in the **Exposure Adjustment** tool to create interesting effects in images of pictures.

The ranges for the numbers in the **White** and **Black** fields are set in the **Preference Controls** tab (see page **47**).

1 Click the **Output Levels** checkbox in the **Exposure Adjustment** tool to select it.

The **White** and **Black** output levels controls appear in the **Exposure Adjustment** tool.

2 Click on the one side of a slider,

– or –

type a different number in the **White** or **Black** field, then press **Tab** or **Enter**,

– or –

click the UP or the DOWN spin button next to the **White** or **Black** field.

The result of the changes to **Output Levels** can be seen in the preview area.

If you want to create an image to use as a backdrop for dark text on a light background, such as an overhead transparency, increase the **Black** output level value until the image is as faint as you like.

If you want to create an image to use as a backdrop for light text on a dark background, such as with color slides, decrease the **White** output level value until the image is as faint as you like.

Appearance with
White control = 255
Black control = 0

Appearance with
White control = 255
Black control = 200

Appearance with
White control = 0
Black control = 255

T I P

Click the **Auto** button in the **Exposure Adjustment** tool to change all the exposure settings to the optimal exposure settings determined by the scanning software

Adjust color

The scanning software automatically selects the optimal color settings for any color output type applied to the image. If the overall color in the original picture is out of balance, or the picture needs more or less color, you can use the **Color Adjustment** tool to increase or decrease:

■ color balance, or hue (see page **80**)

■ color saturation (see page **81**)

The **Color Adjustment** tool is active for these output types:

■ **True Color**
■ **256 Color Web Palette**
■ **256 Color System Palette**
■ **256 Color Optimized Palette**

1 From the **Tools** menu, select **Color Adjustment**.

The **Color Adjustment** tool appears (see page **33**).

2 Change the color balance or saturation as described below.

The color settings you select will be applied to the final scan.

T I P

Adjust image color for photographs that are faded or have too much of one color.

Changing color balance

Use the **Color Wheel** in the **Color Adjustment** tool to change color balance (hue).

Moving the indicator circle

When the image has too much of one color, move the indicator circle toward the opposite side (opposite color) on the **Color Wheel**.

Indicator circle in the **Color Wheel**

■ drag the indicator circle with the mouse, or

■ click a color's triangle

The result of the change to the hue can be seen in the preview area.
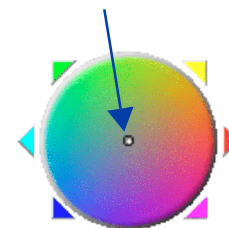
To correct the excess red in the picture below, the indicator circle can be moved into the cyan area of the **Color Wheel**.

Very red   Less red

moved indicator circle
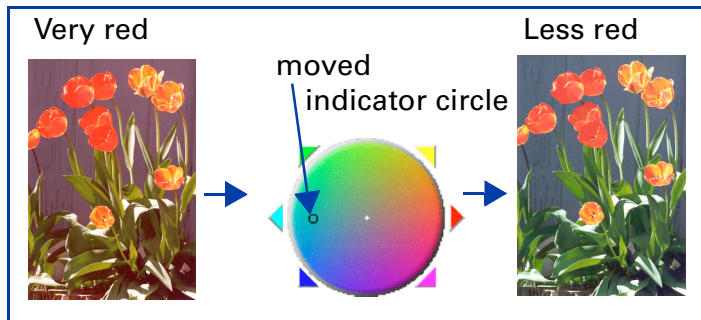
The hue of an image can be changed to create a different effect.

Original   Special effect

moved indicator circle
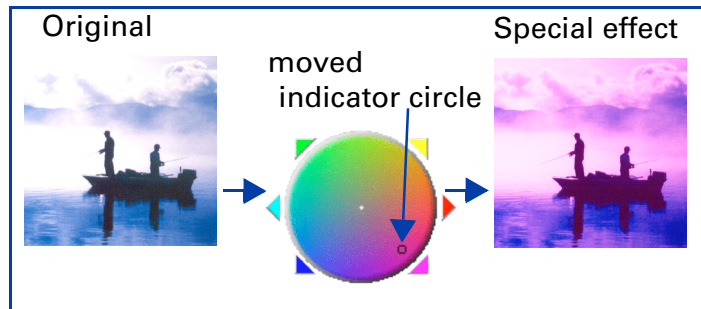
Changing color saturation

You can adjust the amount of color in the image with the **Saturation** slider control in the **Color Adjustment** tool. The higher the number in the **Saturation** field, the more vivid the colors will be in the image. A low number in the **Saturation** field gives the image diluted colors.

The range for the number in the **Saturation** field is 0 to 150.

```
100
```

The result of the change to the saturation value can be seen in the preview area.

Increasing the amount of color

Increase the number in the **Saturation** field to make colors in the image more vivid:

- Click on the right side of the slider,
  – or –
- type a higher number in the **Saturation** field, then press **Tab** or **Enter**,
  – or –
- click the UP spin button next to the **Saturation** field.

Decreasing the amount of color

Decrease the number in the **Saturation** field to dilute the color in the image:

- Click on the left side of the slider,
  – or –
- type a lower number in the **Saturation** field, then press **Tab** or **Enter**,
  – or –
- click the DOWN spin button next to the **Saturation** field.

Saturation set at 100

Saturation set at 150

Saturation set at 75
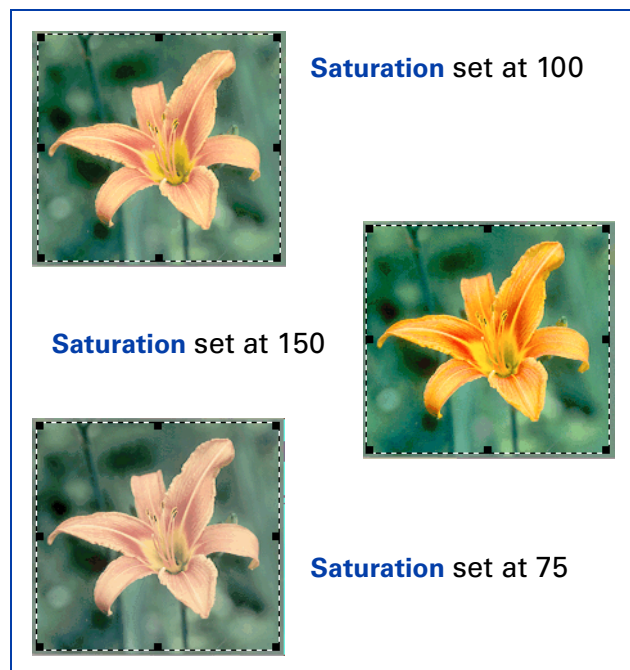
Applying the default color settings

- Click the **Auto** button in the **Color Adjustment** tool.
  - The optimal color settings determined by the scanning software are applied to the **Color Adjustment** tool.
  - The results of the changes to the color settings can be seen in the preview area.

Set output resolution

To keep file size small, shorten printing time, and use less memory, use the lowest possible output resolution setting for an image of a picture.

The output resolution for the image in the selection area is set in the **Output Resolution** tool.

The **Output Resolution** tool is active for these output types:

■ **True Color**
■ **Grayscale**
■ **256 Color Web Palette**
■ **256 Color System Palette**
■ **256 Color Optimized Palette**
■ **Black & White Bitmap (raster)**

1 From the **Tools** menu, select **Output Resolution**.

The **Output Resolution** tool appears (see page **27**).

2 Read the following sections before you change the value for output resolution in the **Output Resolution** tool.

The output resolution setting displayed in the **Output Resolution** tool will be applied to the final scan.

Resolution settings for photographs

Follow these guidelines to set output resolution for color or black and white photographs.

■ Use **75** as the output resolution setting when:
- you plan to display the image on a monitor in a Web page
- the output type is **256 Color Web Palette**, **256 Color System Palette**, **256 Color Optimized Palette**, or **Grayscale**

> **TIP**
>
> For Web page images, higher resolution does not improve image quality, but does increase the number of bytes required to store the image.

■ Use **100** as the output resolution setting when:
- you plan to print the image on a 300 DPI printer
- the output type is **True Color**, **256 Color Optimized Palette**, or **Grayscale**

■ Use **150** as the output resolution setting when:
- you plan to print the image on the HP PhotoSmart printer or a 600 DPI printer

- the output type is **True Color**, **256 Color Optimized Palette**, or **Grayscale**
- you will not be enlarging the photograph (use a higher resolution if you scale the image to greater than 100% of the original's size)

■ Use **300** as the output resolution setting when:
- you plan to print the image on a 1200 DPI printer
- the output type is **True Color**, **256 Color Optimized Palette**, or **Grayscale**
- you will not be enlarging the photograph (use a higher resolution if you scale the image to greater than 100% of the original's size)

Resolution settings for drawings

Follow these guidelines for setting output resolution for images of color or black and white drawings.

■ Use **75** as the output resolution setting when:
- you plan to display the image on a monitor in a Web page
- the output type is **256 Color Web Palette**, **256 Color System Palette**, **256 Color Optimized Palette**, **Grayscale**, or **Black & White Bitmap (raster)**

■ Use **300** as the output resolution setting when:
- you plan to print the image on a 300 DPI printer

- the output type is **256 Color Optimized Palette**, **Grayscale**, or **Black & White Bitmap (raster)**

■ Use **600** as the output resolution setting when:
- you plan to print the image on the HP PhotoSmart printer or a 600 DPI printer
- the output type is **256 Color Optimized Palette**, **Grayscale**, or **Black & White Bitmap (raster)**

■ Use **1200** as the output resolution setting when:
- you plan to print the image on a 1200 DPI printer
- the output type is **256 Color Optimized Palette**, **Grayscale**, or **Black & White Bitmap (raster)**

Applying the default resolution

■ Click , the **AutoResolution** button in the **Output Resolution** tool.
- The optimal resolution setting determined by the scanning software is applied to the **Output Resolution** tool.
- The result of the change to the resolution setting cannot be seen in the preview area.

T I P

You can change the resolution settings available in the **Resolution** tool's list box (see page **46**).

Set threshold for black and white bitmaps

When you want to save a black and white image from a color or black and white photograph, you can often improve the result by changing the threshold for the division between black and white pixels.

The black and white threshold can be changed with the **Black & White Threshold** tool for an image that has the **Black & White Bitmap (raster)** output type. (See page **34** for more about the **Black & White Threshold** tool.)

Applying the default threshold

■ Click the **Auto** button in the **Black & White Threshold** tool.

- The optimal black and white threshold setting determined by the scanning software is applied to the **Black & White Threshold** tool.
- The result of the change to the threshold setting can be seen in the preview area.

Image of a color photograph with the **True Color** output type

The **Black & White Bitmap (raster)** output type and a black and white threshold of 15 applied

Changing the black and white threshold

To bring out details in an image with the **Black & White Bitmap (raster)** output type, decrease the number in the **Black & White Threshold** field:

1 Scan a picture.

2 From the **Tools** menu, select **B & W Threshold**.

The **Black & White Threshold** tool appears.

3 From the **Output Type** menu, select **Black & White Bitmap (raster)**.

The image changes to black and white.

4 Decrease the value in the **Black & White Threshold** field:

- click on the left side of the slider,
  – or –
- drag the slider to the left,
  – or –
- type a lower number in the **Black & White Threshold** field, then press **Tab** or **Enter**,
  – or –
- click the DOWN spin button next to the **Black & White Threshold** field.

The result of the change to the black and white threshold setting can be seen in the preview area.

Image with the **Black & White Bitmap (raster)** output type

Threshold 127 (the default for this image)

Threshold 49

The range for the number in the threshold field is set in the **Preference Controls** tab (see page **47**).

T I P

Try changing the sharpen level to improve the result when you are changing a color or black and white photograph to a **Black & White Bitmap (raster)** image.

Set color channel for black and white bitmaps

When you want to save a black and white bitmap of a picture that has been printed or photocopied on colored paper, or want to create a special effect, you can change the color channel used in the final scan.

Eliminating a color from the image

By changing the color channel setting in the **Black & White Threshold** tool you can eliminate red, green or blue from the image (see page **88**).

1 Scan a picture.

2 From the **Tools** menu, select **B & W Threshold**.

The **Black & White Threshold** tool appears.

3 From the **Output Type** menu, select **Black & White Bitmap (raster)**.

The image changes to black and white.

4 Decrease the value for the black and white threshold (see page **86**).

> **T I P**
>
> The **Auto** button in the **Black & White Threshold** tool does not reset the color channel.

5 Select a color channel from the **Scan using channel** list box in the **Black & White Threshold** tool:

■ To eliminate all the red in colored line art or from a drawing printed on red or pink paper, choose the **Red** channel. The red components of each pixel in the image will be mapped to white and green and blue components of each pixel will be mapped to black.

■ To eliminate all the green in colored line art or from a drawing printed on green paper, choose the **Green** channel. The green components of each pixel in the image will be mapped to white and red and blue components of each pixel will be mapped to black.

■ To eliminate all the blue in colored line art or from a drawing printed on blue paper, choose the **Blue** channel. The blue components of each pixel in the image will be mapped to white and red and green components of each pixel will be mapped to black.
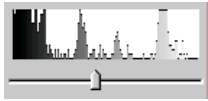
Examples of changing color channels

Images of a color drawing changed to the **Black & White Bitmap (raster)** output type are shown with different color channels and black and white threshold settings applied in the **Black & White Threshold** tool.

Original with **True Color** output type

Black & White Bitmap (raster) output type applied with **NTSC Gray** color channel and automatic threshold (110)
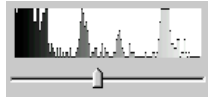
Red color channel and automatic threshold (110)
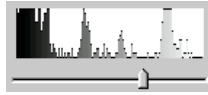
Green color channel and automatic threshold (110)

Blue color channel and automatic threshold (110)

Blue color channel and higher threshold (173)

TIP

The **NTSC Gray** channel in the **Scan using channel** list box of the **Black & White Threshold** tool converts color to gray at a ratio of 30% red, 59% green, and 11% blue.

5 Scanning text

Scan and convert a block of text

A block of text can be selected in the preview image for conversion to editable, unformatted text.

1 **Preview** scan (page **50**).

2 From the **Output Type** menu, select **Text** as the output type.

3 Create a selection area (see page **51**).

4 To enlarge the view of the selection area:

• click ![icon], the **Zoom** button in the toolbar, or

• from the **Scan** menu, choose **Zoom**.

The scanner scans the selection area and the selection area fills the preview area.

5 Adjust the selection area to include all the characters you want in the final scan (see page **55**).

6 To begin the final scan and the character conversion:

• drag-and-drop to another program (see page **91**), or

• **Copy** to the **Clipboard** (see page **92**), or

• **Save** to a file (see page **92**).

Original   Preview image   Zoomed image   Drag-and-drop or **Copy** and **Paste**,
with selection area   or **Save** to a file.
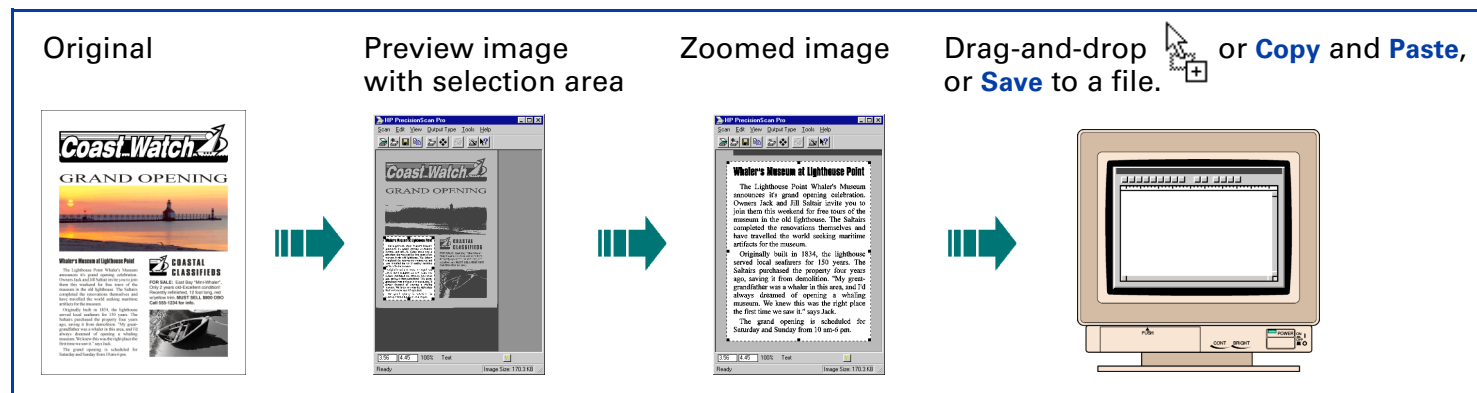
Selecting Text

- Always **Zoom** scan a selection area you want to convert to text, then adjust the position and size of the selection area to be sure it contains all the characters you want to convert.

- The text in the selection area is displayed at a low resolution and may not appear readable, even after a **Zoom** scan.

- During the final scan when you drag-and-drop, copy, or save the selection area, the text will be scanned at a higher resolution before it is converted to editable text.

Drag-and-drop to another program

1 Start the destination program.

2 Open the document and view the page that will receive the image.

3 In the scanning software window, position the pointer inside the selection area.

The pointer changes to ✛ .

4 Press the left mouse button and drag the image to its position in the open document.

The pointer changes to ⊞ .

5 Release the mouse button.

A final scan of the image is performed.

The text is converted to editable text and placed in the open document.

TIP

Be sure to keep the original in the same place on the scanner glass until the final scan of the image is completed.

Copy to the Clipboard

**1** Click , the **Copy** button in the toolbar, or from the **Edit** menu select **Copy**, or or press **Ctrl+C**.

A final scan of the image is performed.

The text is converted to editable text.

A copy of the text is placed in the **Clipboard**.

2 To paste the text in another program's open document:

- Start the destination program.
- Open the document and view the page that will receive the text.
- Position the pointer where you want to place the text, then click.
- From the program's **Edit** menu, choose **Paste**, or press **Ctrl+V**.

The text appears where you pasted it.

Save to a file

1 Click , the **Save As...** button in the toolbar, or from the **Scan** menu, select **Save As...**, or press **Ctrl+S**.

The **Save As** dialog box appears.

The only file format choice in the **Save as type** list box is **Text File (.txt)**.

2 In the **Save in** box, choose the directory where you want to save the text file.

3 In the **File name** box, type a name for the text file.

4 Click **Save**.

A final scan of the text is performed.

The text is converted to editable text.

The text is saved to the file.

Scan a whole page

A entire page of text, or text and pictures, can be saved to a rich text format file (.rtf) that contains editable, formatted text and images.

1 **Preview** scan (page **50**).

It is not necessary to create a selection area or choose an output type.

2 From the **Scan** menu, select **Save As Whole Page**.

The **Save As** dialog box appears.

The only file format choice in the **Save as type** list box is **Rich Text File (.rtf)**.

3 In the **Save in** box, choose the directory where you want to save the file.

4 In the **File name** box, type a name for the file.

5 Click **Save**.

A final scan of the entire area of the scanner glass is performed.

The text is converted to editable text.

The text and images are saved to the .rtf file.

6 To use the **.rtf** file, open it in a program that can interpret rich text format files.
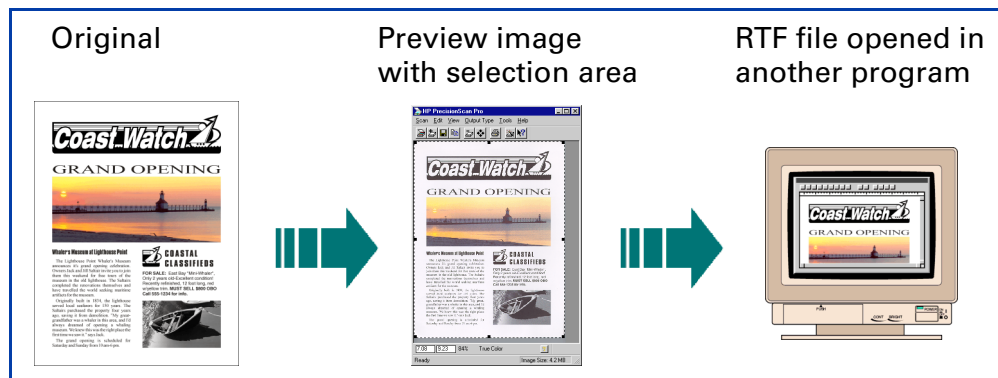
Original	Preview image with selection area	RTF file opened in another program

6 Saving scanned images

How you can use the image

When you have scanned a picture and are satisfied with the image in the selection area, there are several ways to use the image.

■ Print the image from the scanning software (see page **96**).

Printing the image from the scanning software results in a hardcopy of the image, but does not save it to the hard disk.

■ Make the image permanent by placing it directly from the scanning software into another program. When you save the document you placed the image in, the image is saved with the document.

You can place the image directly into another program using:

• drag-and-drop (see page **97**)

• copy and paste (see page **99**)

• TWAIN (see page **11**)

■ Make the image permanent by saving it to a file.

An image file can be created using:

• drag-and-drop to the **Desktop** (see page **98**)

• the **Save As...** command (see page **100**)

T I P

When scanning text, you can convert it to editable text.

■ To save unformatted, editable text, see page **90**.

■ To save formatted, editable text, see page **93**.

Print the image

When you print a copy of the image in the selection area you will be able to see the size and quality of the printed image.

Use the **Print** command to send a copy of the image to a printer.

1 Click , the **Print** button in the toolbar, or from the **Scan** menu, select **Print**, or, press **Ctrl+P**.

The **Print** dialog box appears.

2 Fill out the options in the **Print** dialog box.

3 Click **OK**.

A final scan of the image is performed.

The image is sent to the printer.
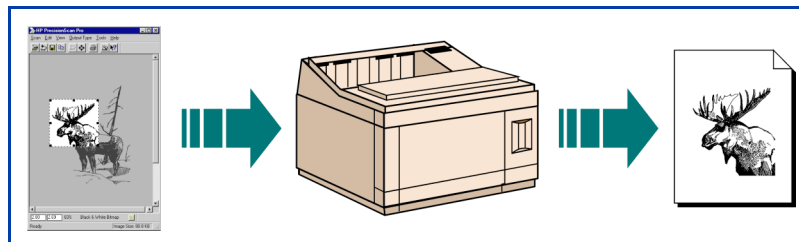
T I P

■ If no selection area has been drawn, the entire area of the scanner glass is printed.

■ Be sure to keep the original in the same place on the scanner glass until the final scan of the image is completed.

Drag-and-drop to another program

The image in the selection area can be dragged and dropped into another program that supports drag-and-drop.

After the image is dropped into the destination program, the image becomes part of the document file.
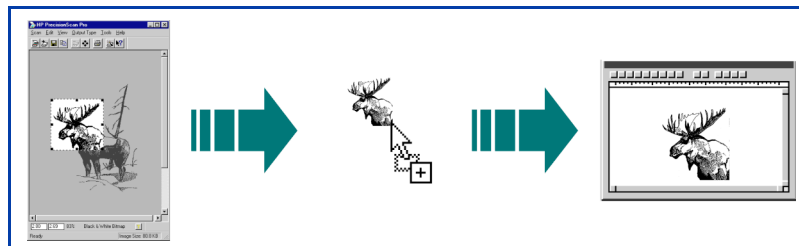
1 Start the destination program.

2 Open the document and view the page that will receive the image.

3 In the scanning software window, position the pointer inside the selection area.

   The pointer changes to ✛ .

4 Press the left mouse button and drag the image to its position in the open document.

   The pointer changes to ▨ .

   (If the pointer changes to ⊘, the destination program does not accept drag-and-drop.)

5 Release the mouse button.

   A final scan of the image is performed.

   The image appears in the destination program.

TIP

Be sure to keep the original in the same place on the scanner glass until the final scan of the image is completed.

Drag-and-drop to the Desktop

You can create a bitmap file of the image in the selection area by dragging the selection area to the **Desktop** or to a folder in the Windows **Explorer**.

The file name for each new bitmap file after the first one created this way includes a number in parentheses.
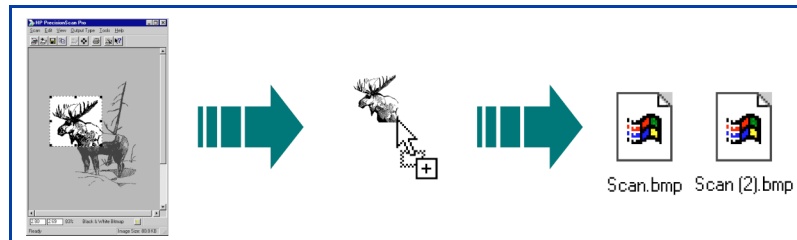
1 In the scanning software window, position the pointer inside the selection area.

The pointer changes to ⊕ .

2 Hold the **Ctrl** key down, press the left mouse button, then drag the selection area to the **Desktop** or to a folder in the Windows **Explorer**.

The pointer changes to 🔲 .

3 Release the mouse button.

A final scan of the image is performed.

A bitmap file named **Scan.bmp** is created on the **Desktop** or in the folder in the Windows **Explorer**.

T I P

■ Be sure to keep the original in the same place on the scanner glass until the final scan of the image is completed.

■ If you are running **Internet Explorer**, only one bitmap file named **Scan.bmp** can exist in a folder.

■ Rename the **Scan.bmp** file with a name that reflects what image is in the file.

Copy to the Clipboard

The image in the selection area can be copied to the **Clipboard**, then pasted into the destination program. After the image is pasted into the destination program, the image becomes part of the document file.
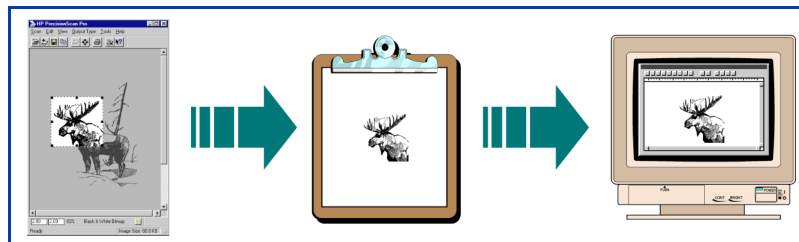
Copying the image

1 Create a selection area (see page **51**).

2 Click , the **Copy** button in the toolbar, or from the **Edit** menu select **Copy**, or or press **Ctrl+C**.

A final scan of the image is performed.

A copy of the image is placed in the **Clipboard**.

> **T I P**
>
> Be sure to keep the original in the same place on the scanner glass until the final scan of the image is completed.

Pasting the image

1 Start the destination program.

2 Open the document and view the page that will receive the image.

3 Position the pointer where you want to place the image, then click.

4 From the program's **Edit** menu, choose **Paste**, or press **Ctrl+V**.

The image appears where you pasted it.

Save to a file

The image in the selection area can be saved to a file, then the image file can be inserted into another program's document with an **Insert File** or **Import File** command.

You will need to know what file format to use when saving the file.
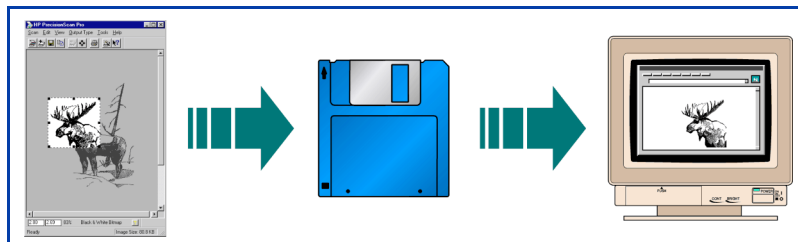
File formats

The scanning software can save images in several graphics file formats.

> **T I P**
>
> Not all output types can be saved in all file formats. Only the valid file formats for the output type applied to the image can be selected from the **Save as type** list box in the **Save As** dialog box.

Bitmap Image (.bmp)

An image file format used by Microsoft Windows and many Windows programs. This is often a good choice because Windows itself and most Windows programs accept the .bmp file type.

FlashPix (.fpx)

A FlashPix file contains a complete image plus several lower resolution copies of that image. The advantage of the FlashPix file format over other file formats is that a software program can automatically select the best resolution for a particular job to make editing and using images in programs faster and easier.

GIF Image (.gif)

GIF is a compressed file format suitable for an image that will be used on the Web or on multiple platforms.

JPEG Image (.jpg)

JPEG is a compressed file format for images. Its strengths are small file sizes and speed. The trade-off for these advantages, though, is reduced image quality. Since each time an image is compressed with JPEG it loses a little of the image data, avoid compressing a file with JPEG more than once. JPEG is an appropriate file format for an image that will be used on the Web or on multiple platforms.

Text File (.txt)

The Text File file format is used for saving to a .txt file when:

- the selection area contains only text
- the **Text** output type is applied
- you want the text converted to editable, unformatted, ASCII text

TIFF Image (.tif)

TIFF is an industry-standard image file format. TIFF files are usually created by scanners and are widely accepted by programs that work with photographs and other images. A TIFF file is a bitmapped graphic (also called a raster graphic) and can be any resolution. TIFF image files can be used on multiple platforms.

TIFF Compressed (.tif)

Compressed TIFF files for images are smaller than the TIFF Image files. Images with the **Black & White Bitmap (raster)** output type are compressed with PackBits compression. All other output types are compressed with LZW compression.

PCX Image (.pcx)

The PCX file format is for images used in Windows programs such as PC Paintbrush and Paint.

Rich Text File (.rtf)

The Rich Text File file format is used with the **Save As Whole Page...** command to create an RTF file of a page that contains text or text and pictures. The formatting of text in an RTF file can usually be interpreted by other programs.

Windows Metafile (.wmf)

The Microsoft Windows Metafile file format is used for scalable (vector) images in Windows programs. The .wmf file format is available for drawings when the **Black & White Scalable (vector)** output type is applied to a selection area that contains a drawing.

Saving the file

1 Click ⊞ , the **Save As...** button in the toolbar, or from the **Scan** menu, select **Save As...**, or press **Ctrl+S**.

   The **Save As** dialog box appears.

2 In the **Save in** box, choose the directory where you want to save the file.

3 In the **File name** box, type a name for the image file.

4 From the **Save as type** list box, choose a file type.

5 Click **Save**.

   A final scan of the image is performed.

   The image is saved to the file.

   The file name extension for the selected file type is automatically added to the file name.

TIP

Be sure to keep the original in the same place on the scanner glass until the final scan of the image is completed.

Reducing file size

You can reduce the size of an image file in the scanning software by:

■ reducing resolution

■ avoiding the **True Color** output type

■ reducing the scale of the image

■ saving with a compressed file format (.gif, .jpg, or .tif compressed)

7 Scanning 35mm slides

The 35mm slide adapter

The HP ScanJet slide adapter can be used to scan 35mm mounted slide photographs.

Placing the slide and the adapter

1 Lift the scanner lid so that it stays up.

2 Place the adapter next to the top edge of the scanner glass so that the arrowhead on the adapter points to the arrowhead on the scanner bed.

3 Tip the adapter toward the scanner lid.

4 Turn the slide so the emulsion side is next to the scanner glass.

5 Orient the slide with the top of the picture directed to the top edge of the scanner glass.

6 Place the slide under the notched section of the adapter.

7 Lower the adapter onto the scanner glass.
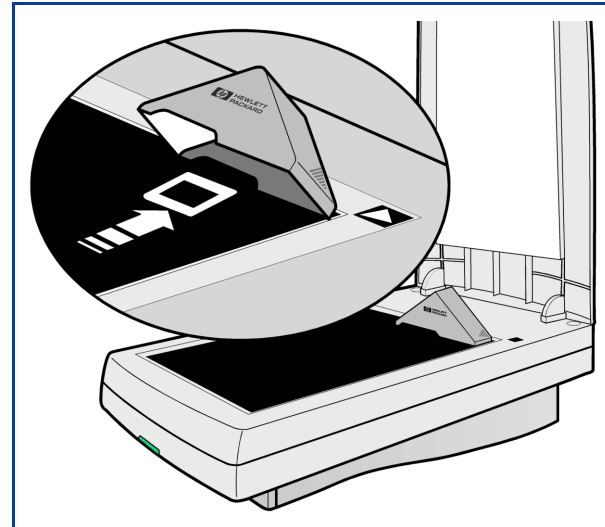
Scan the slide

1 **Preview** scan (page **50**).

2 Create a selection area of the part of the image you want in the final scan (page **51**).

3 **Zoom** scan (page **56**).

4 Set the output dimensions (page **58**).

5 If necessary, make adjustments to the image (see **Chapter 4 Adjusting images of pictures** page **65**).

6 Save, copy, drag-and-drop, or print (see **Chapter 6 Saving scanned images** page **94**).

A **Preview** scan of the slide

| **T I P** |

Be sure to keep the slide in the same place on the scanner glass until the final scan of the image is completed.
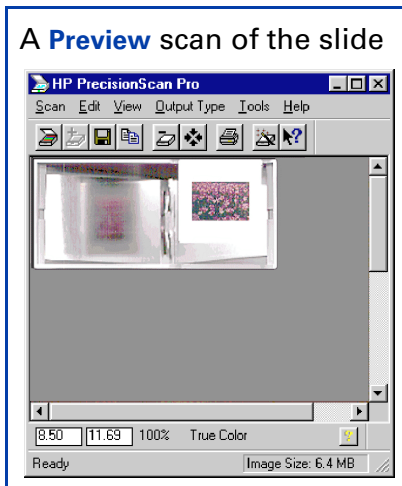
A **Zoom** scan of the selection area

Index

H

Help
- HP ScanJet Coach **36**
- menu **19**
- online manuals **37**
- Show Me **36**
- status bar **35**
- ToolTips **35**
- using **35**
- videos **36**
- What's This Help **35**

highlights **32**, **70**, **71**

histogram
- Black & White Threshold tool **34**
- Exposure Adjustment tool **32**, **74**

HP PrecisionScan Pro
- Edit menu **16**
- Help menu **19**
- info bar **22**
- menus **15**
- Output Type menu **17**
- pointers **24**
- Preferences dialog box **41**
- Scan menu **15**
- status bar **23**
- toolbar **20**
- Tools menu **18**
- View menu **16**
- window **14**

HP ScanJet Button Manager **12**

HP ScanJet Coach **36**

HP scanner support **3**

hue **33**, **80**

I

images
- acquiring with TWAIN **11**
- copying **99**
- drag-and-drop **97**, **98**
- output dimensions **58**
- printing **96**
- resolution **27**, **83**
- saving **98**, **100**
- scaling **60**
- straightening **9**
- using **95**

info bar **14**, **16**, **22**

J

jagged images **58**

JPEG file format **101**

.jpg **101**

L

Load Settings command **15**

loading settings **40**

M

Maximum Pixel Depth **43**

menus
- Edit **16**
- Help **19**
- Output Type **17**
- Scan **15**
- Tools **18**
- View **16**

midtones **32**, **70**, **73**

monitors, 256 color **63**

N

NTSC Gray color channel **88**

O

online Help, using **35**

online manuals **37**

optimized palette **63**

output dimensions **30**, **58**

output levels for pixels **78**

output resolution **27**, **83**

Output Resolution tool **27**, **83**
- adding or deleting values **46**
- AutoResolution **27**

output type
- and adjustments **66**
- automatic application **45**
- changing **63**
- choosing **62**
- for clip art **17**
- suggestions for choosing **64**

Output Type menu **17**

P

.pcx **101**

PCX file format **101**

photographs
- output types for **62**, **83**
- resolution **83**